

**FIG. 1**

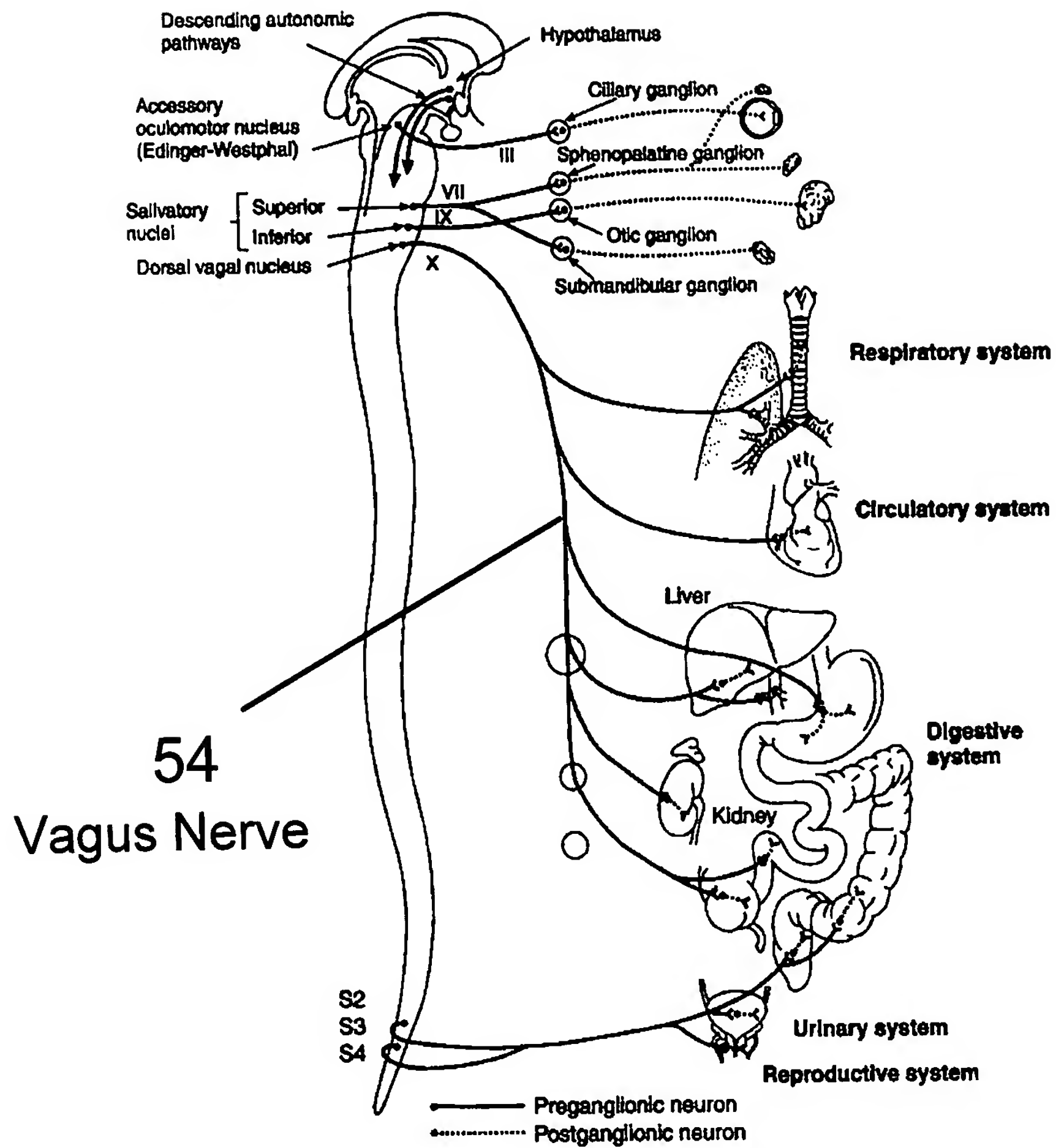


FIG 2

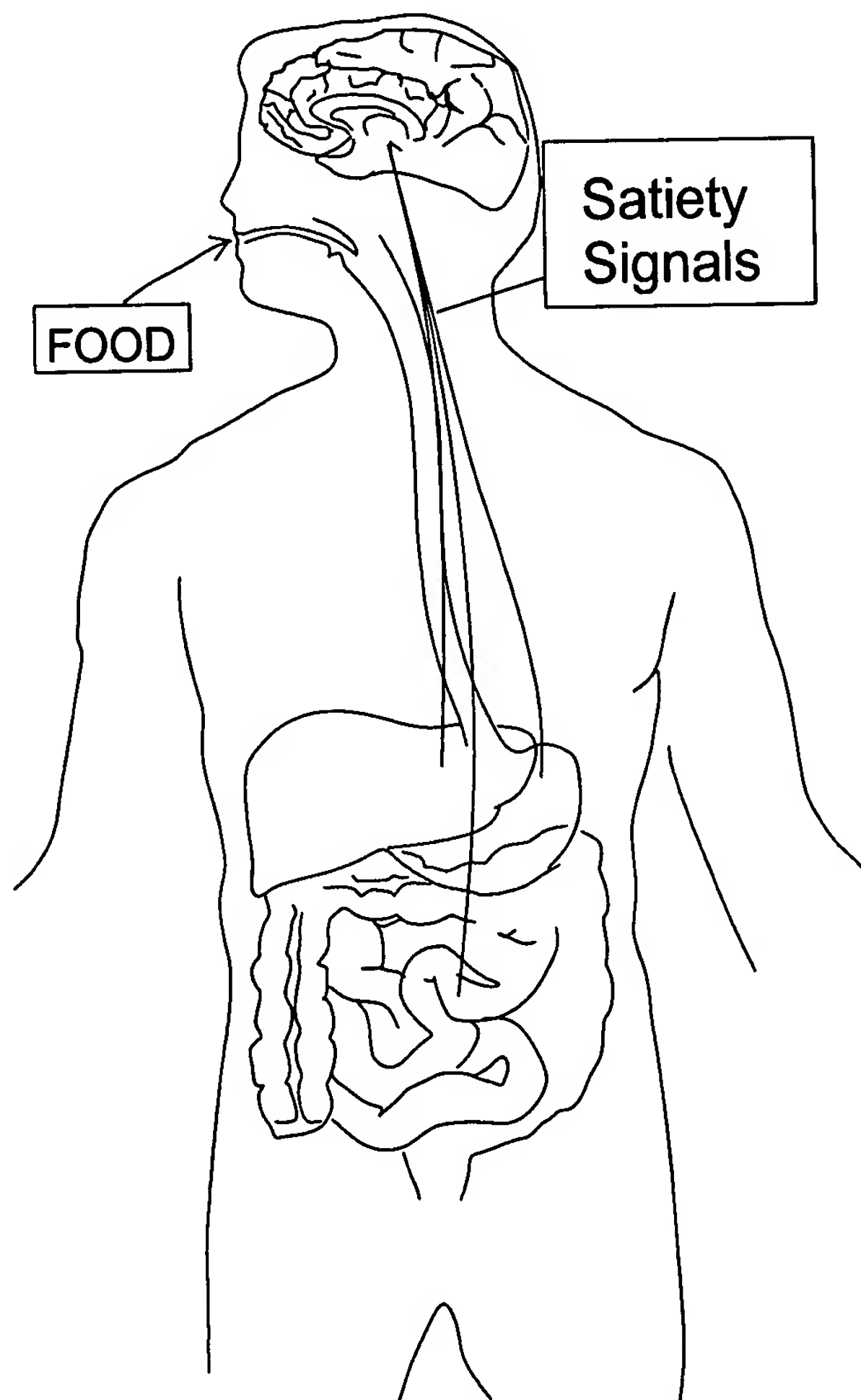
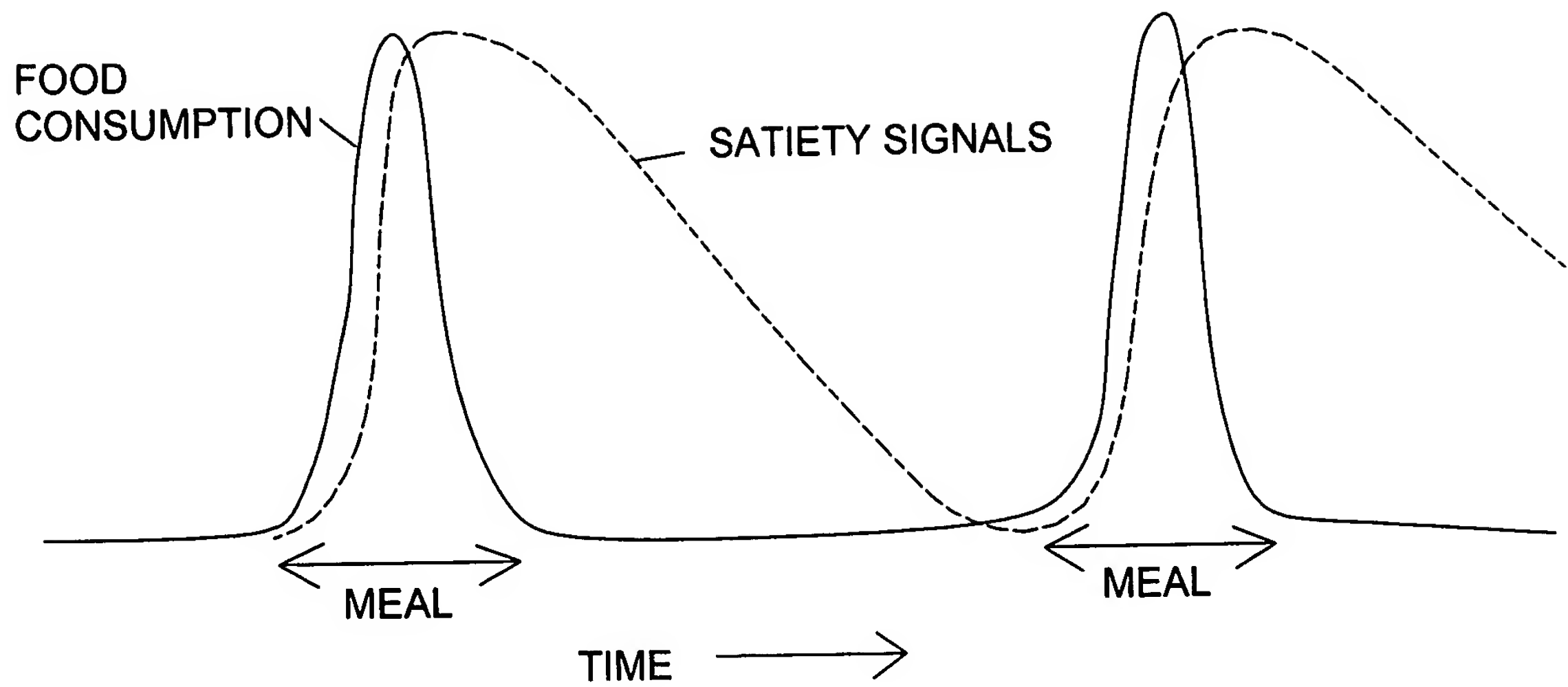


FIG. 3

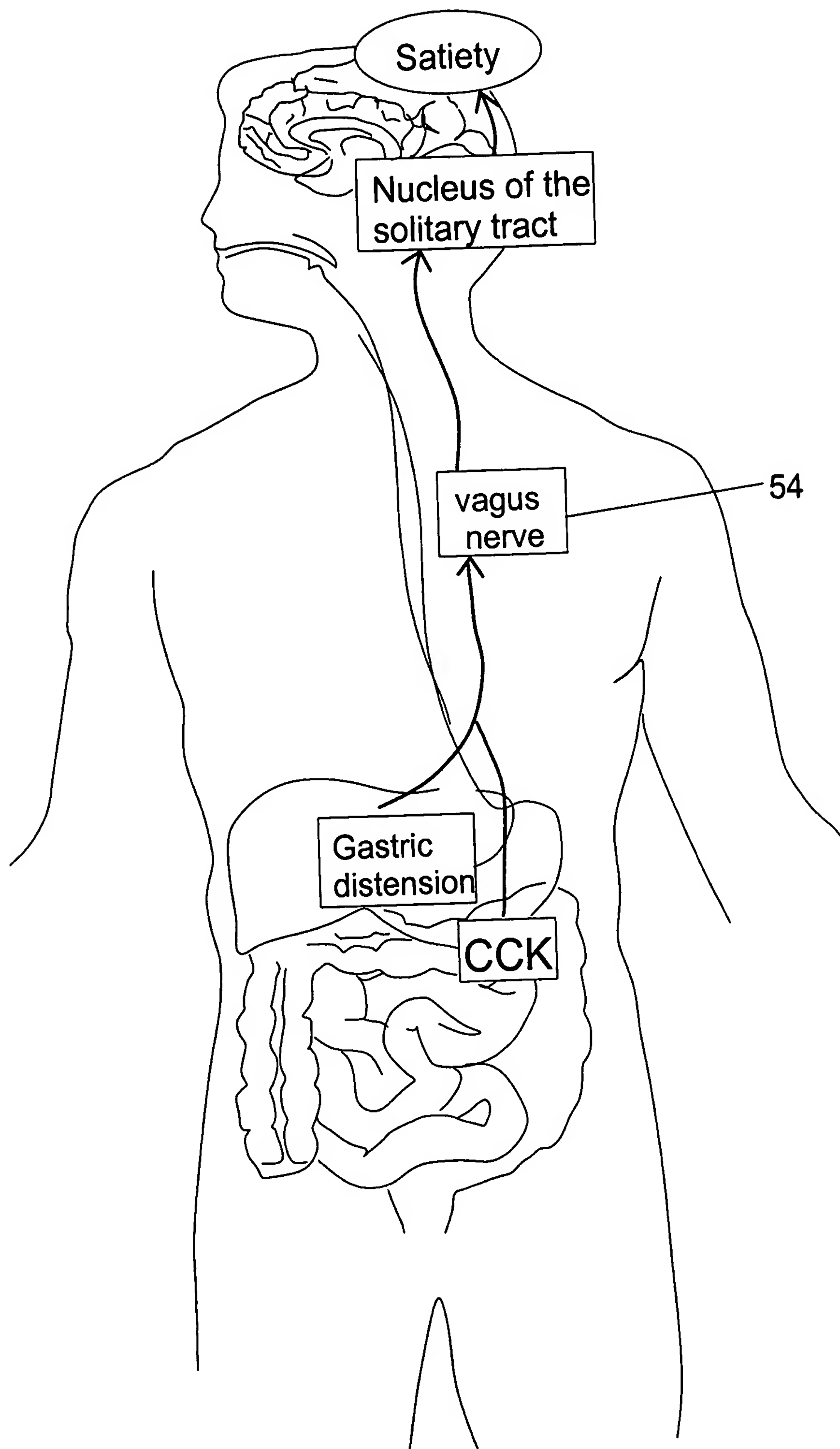


FIG. 4

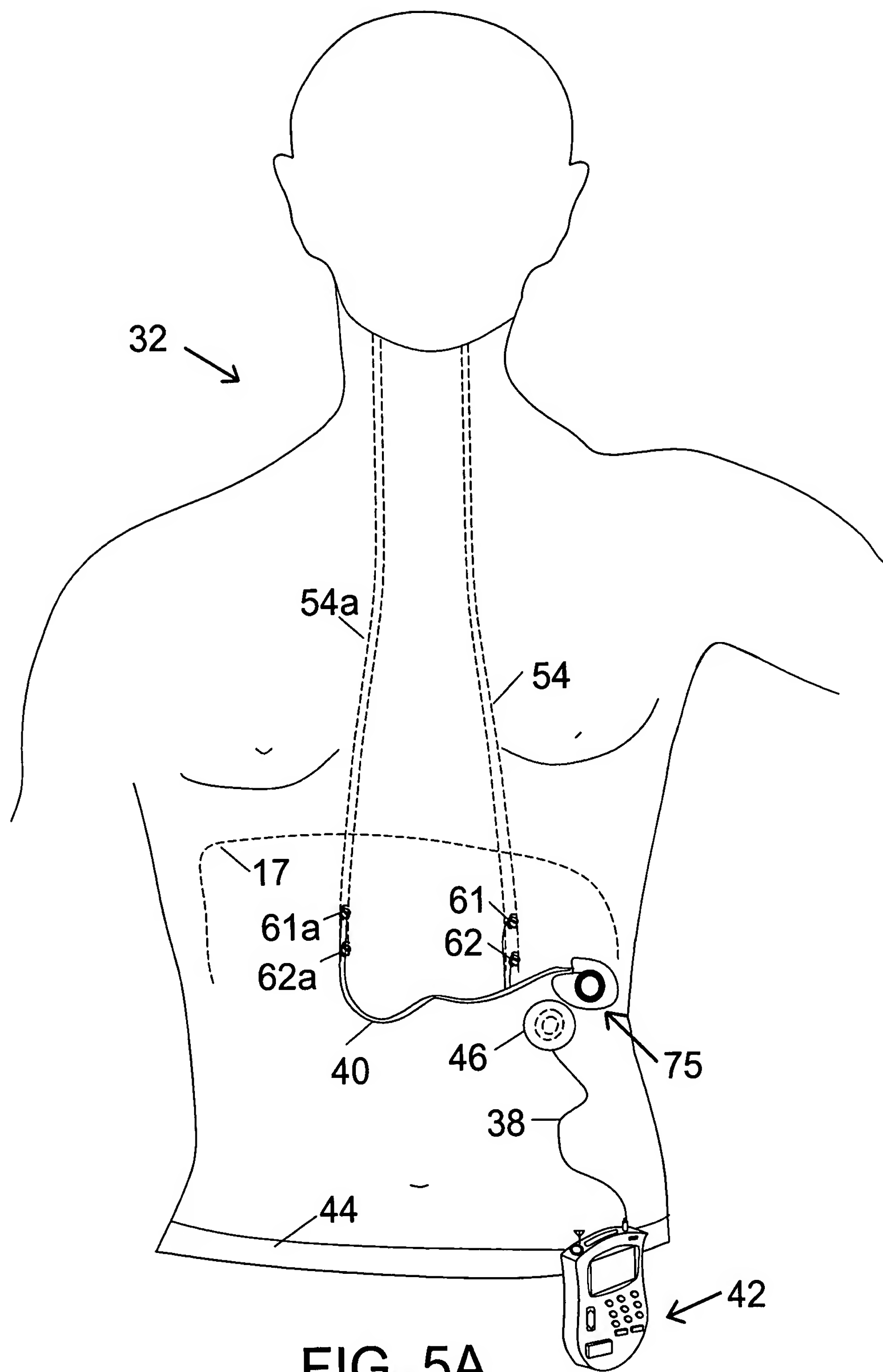


FIG. 5A

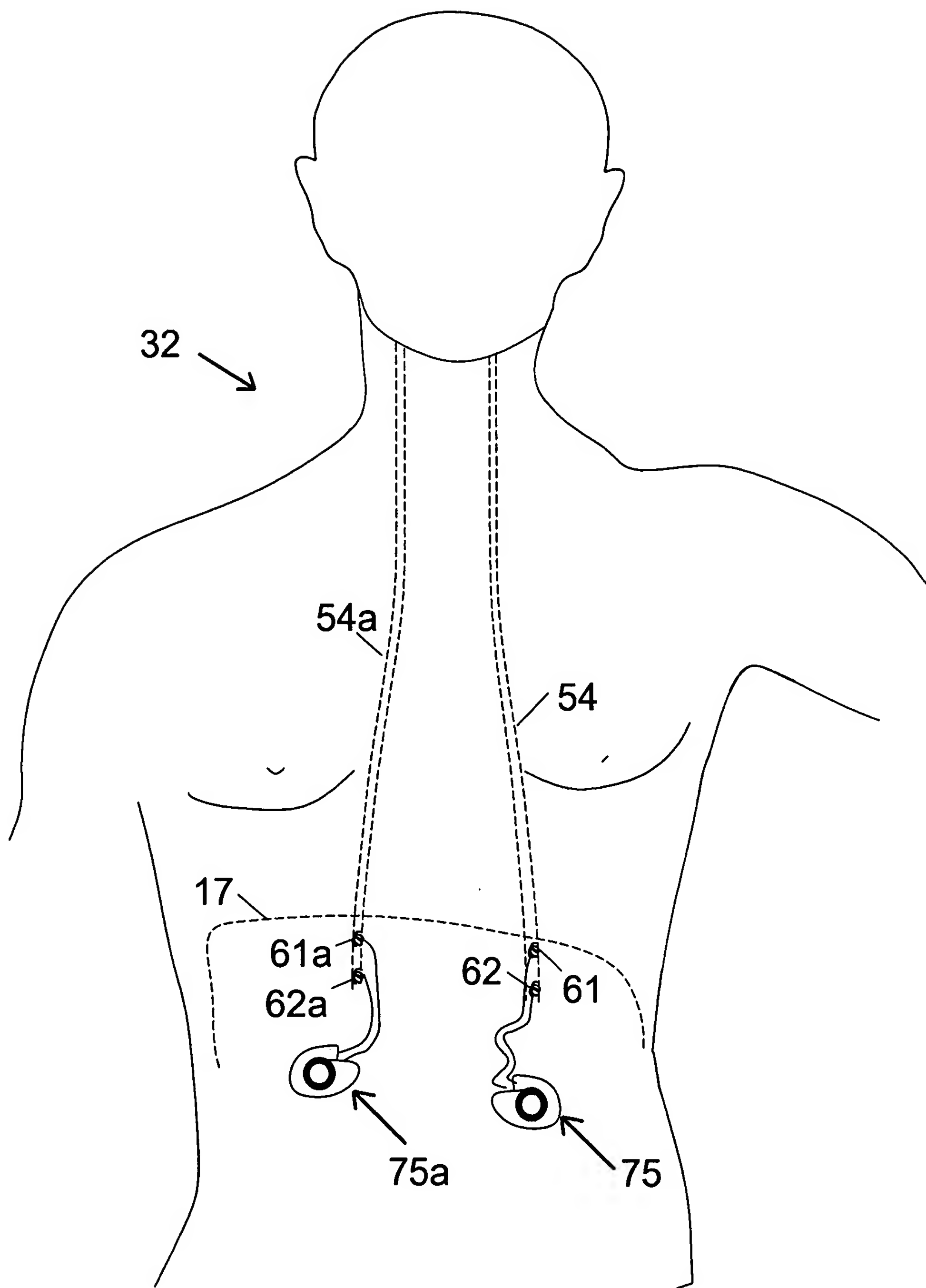


FIG. 5B

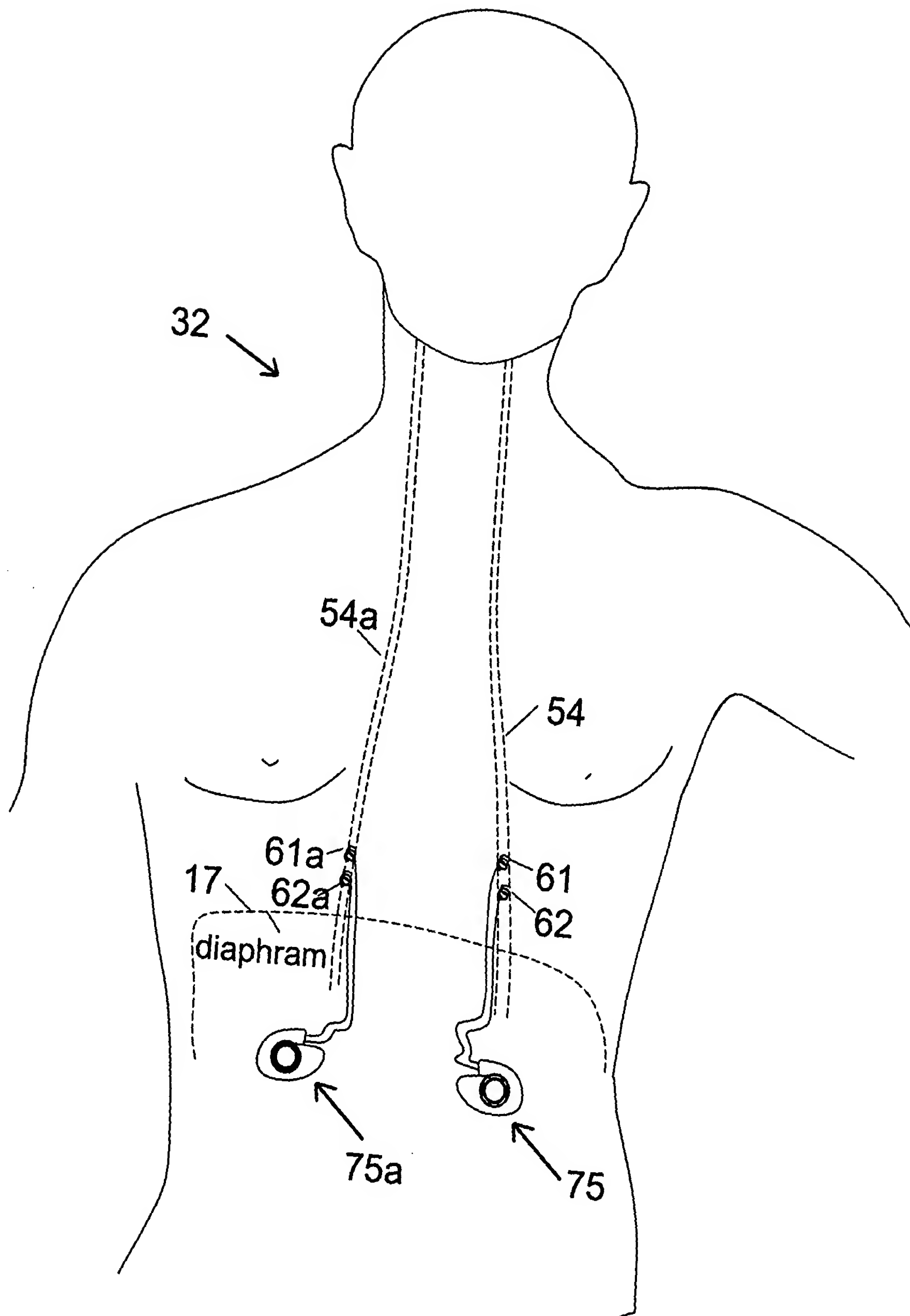


FIG. 5C

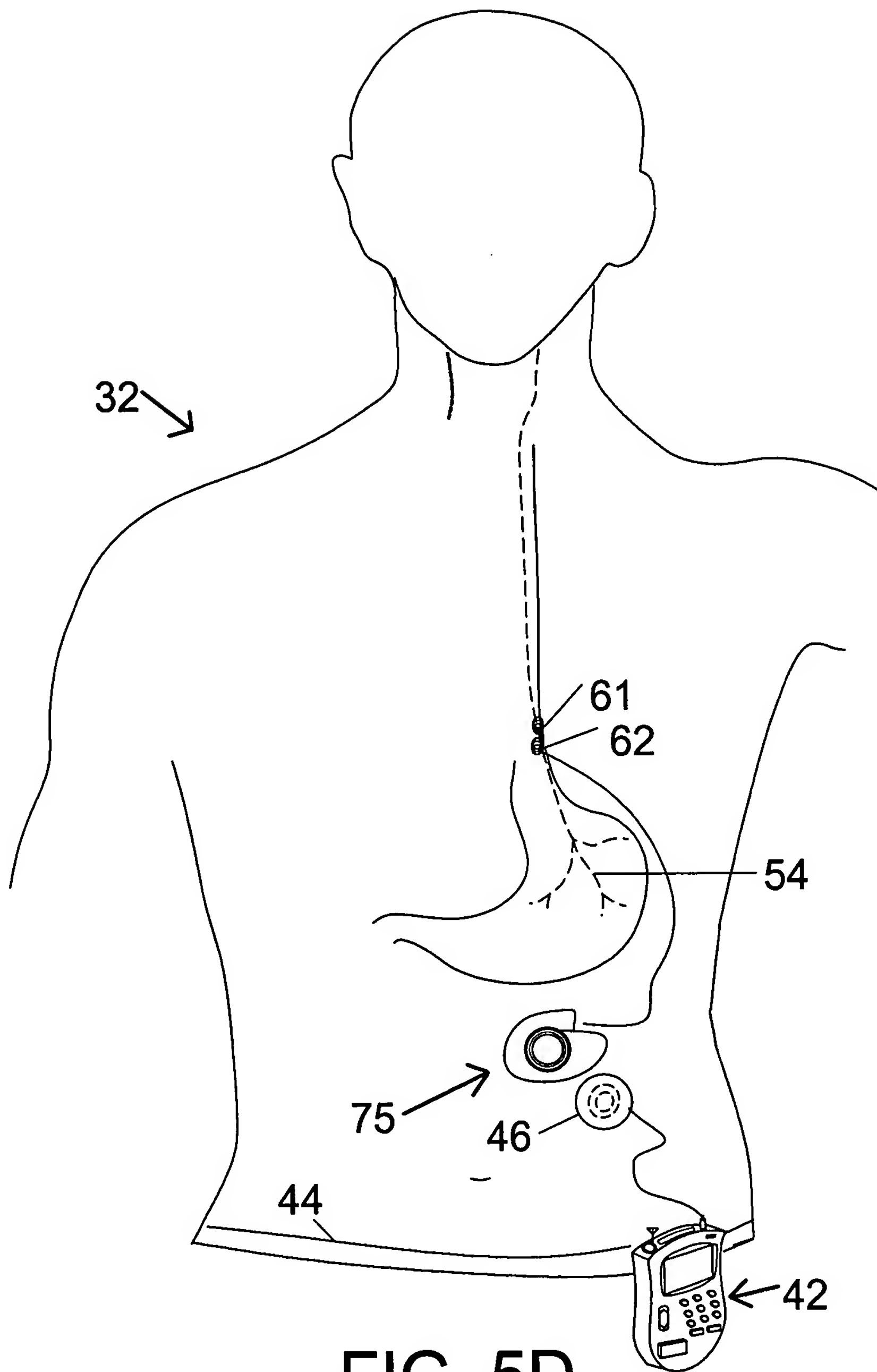


FIG. 5D



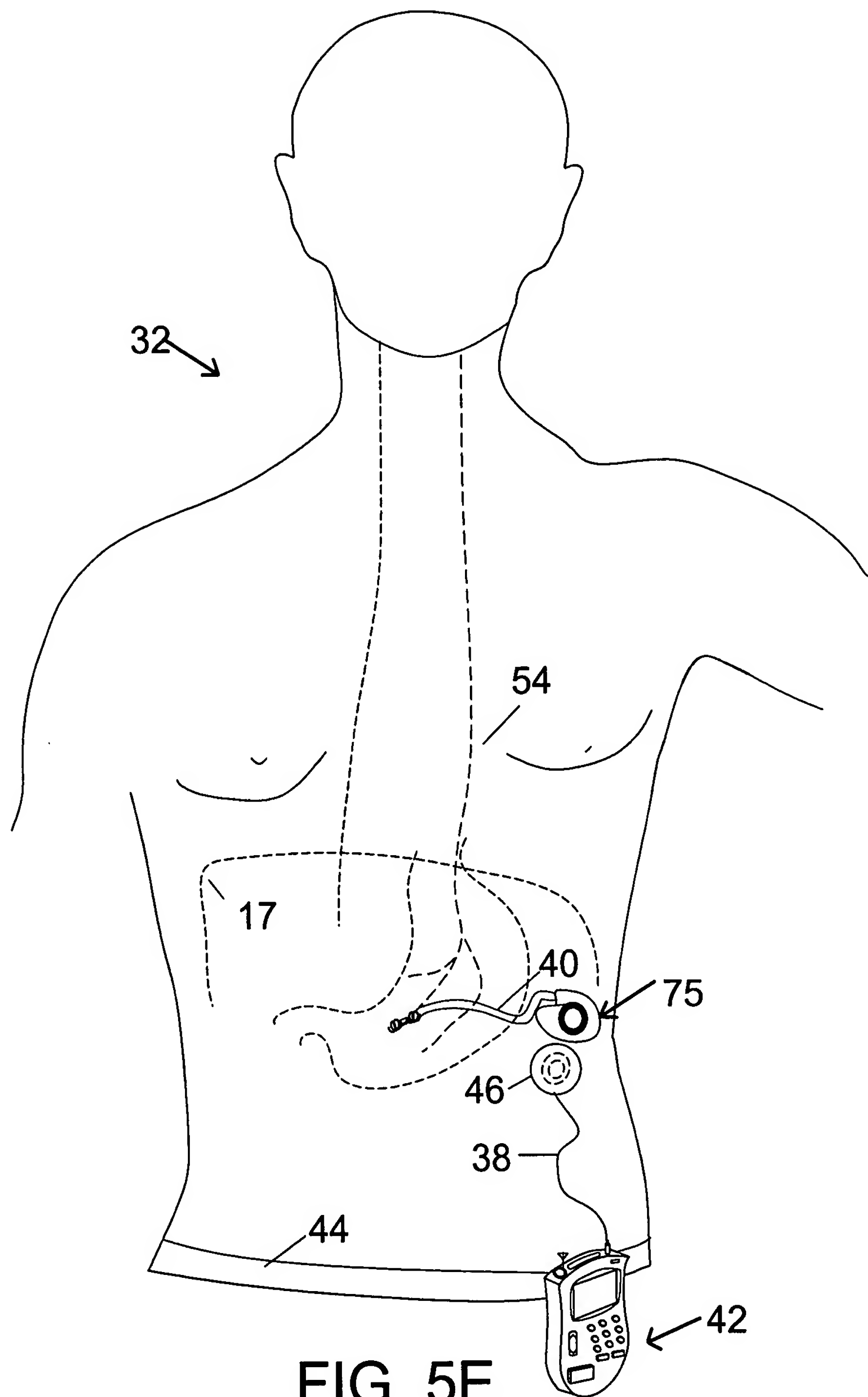


FIG. 5E

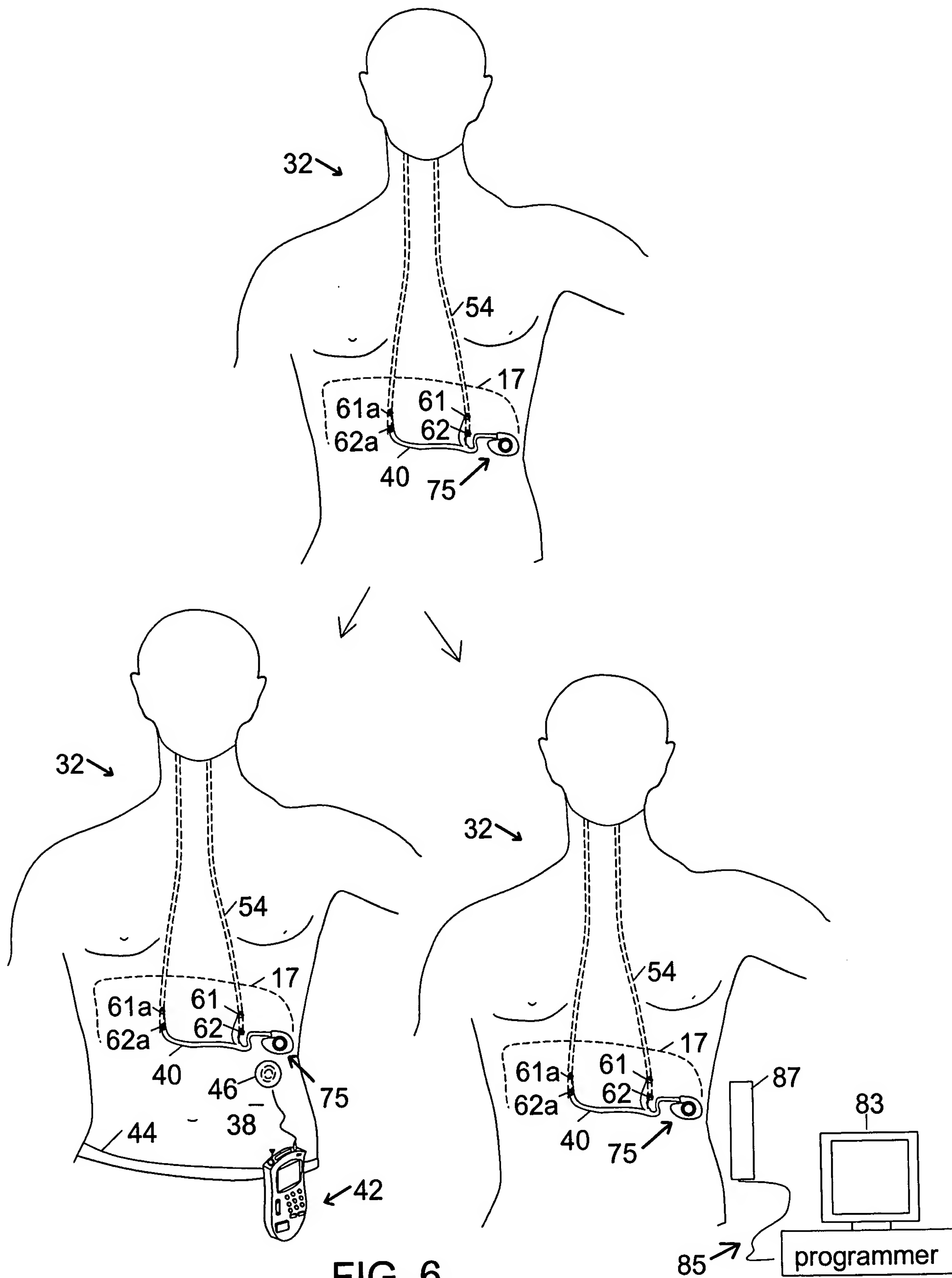


FIG. 6

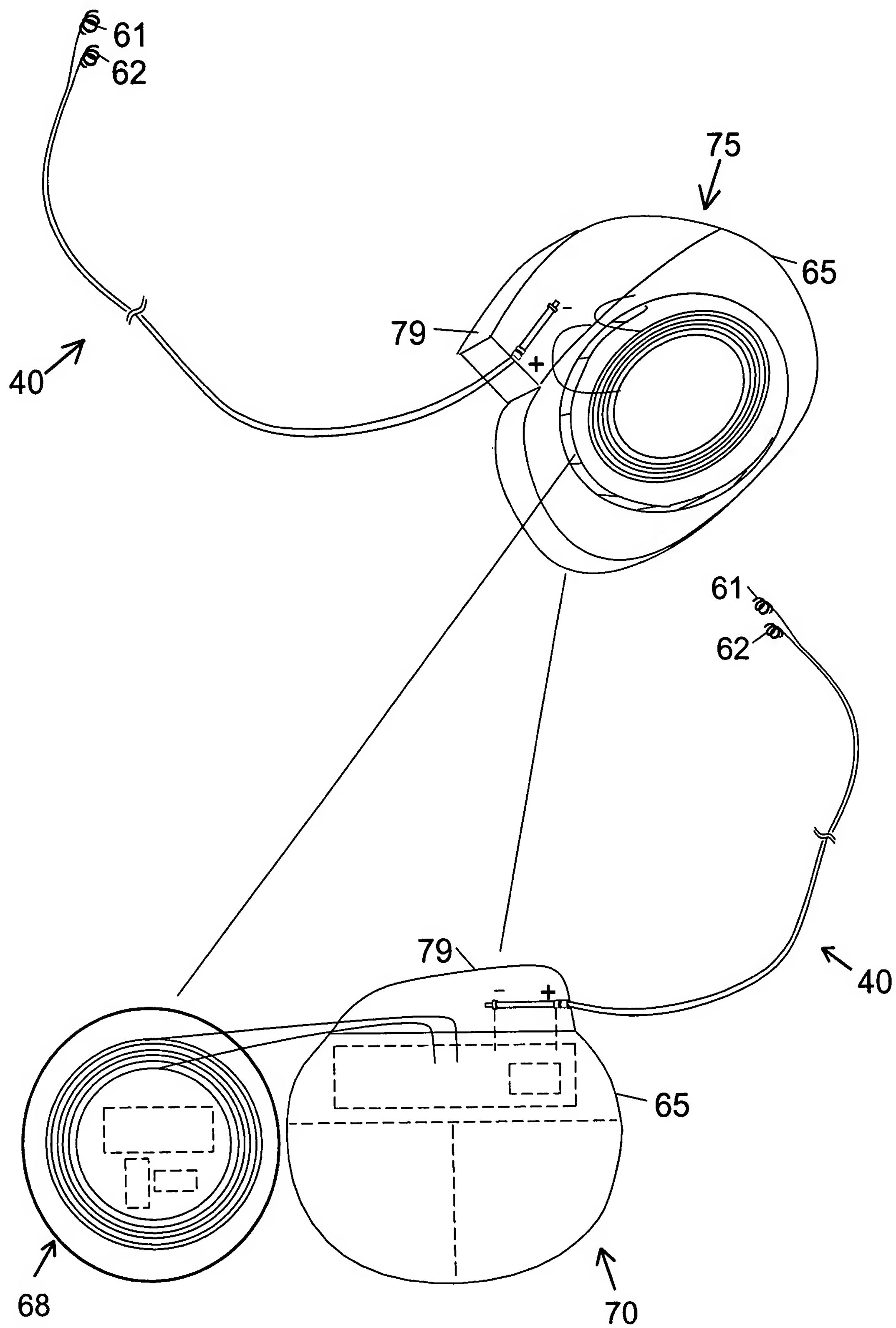


FIG. 7

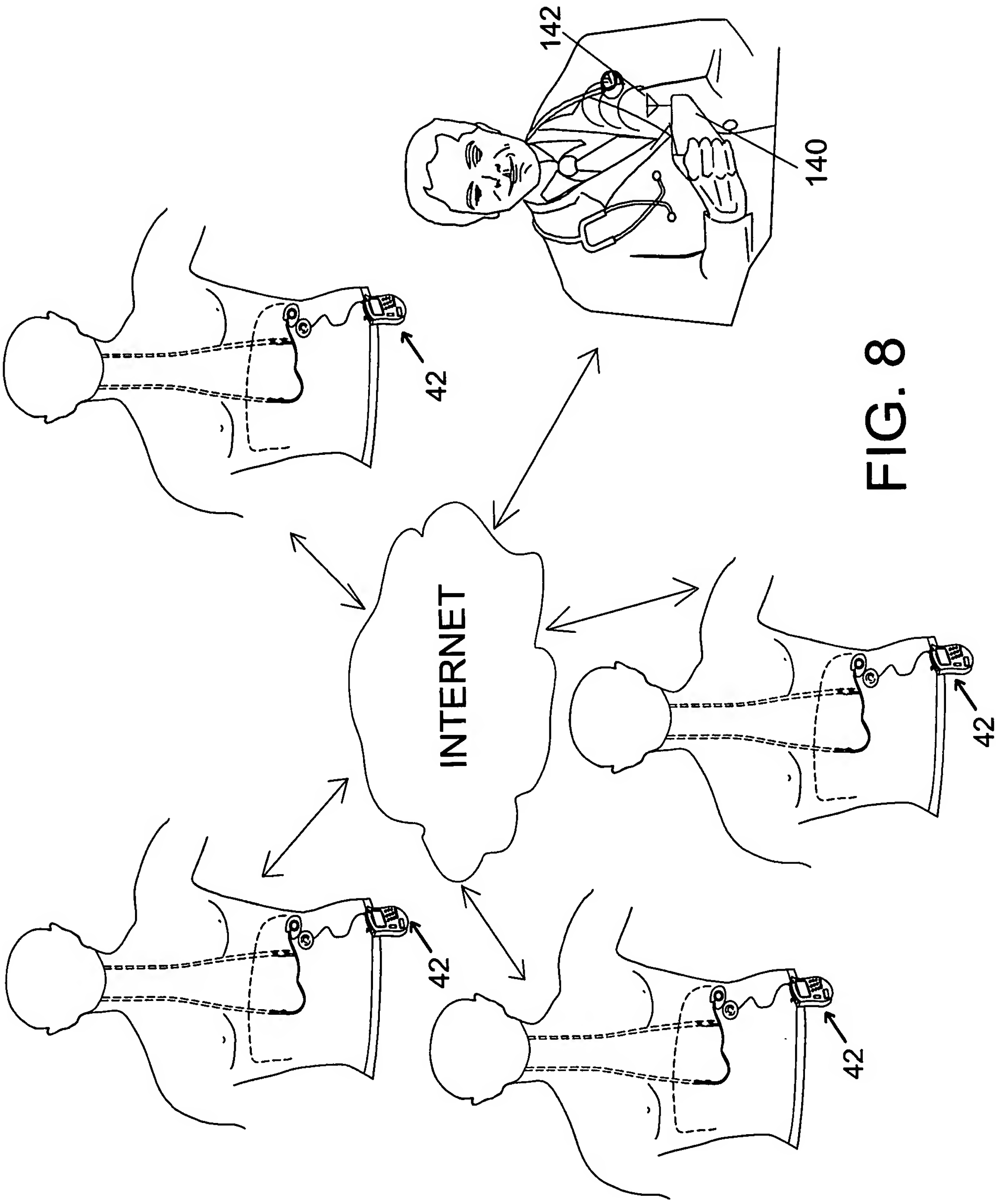


FIG. 8

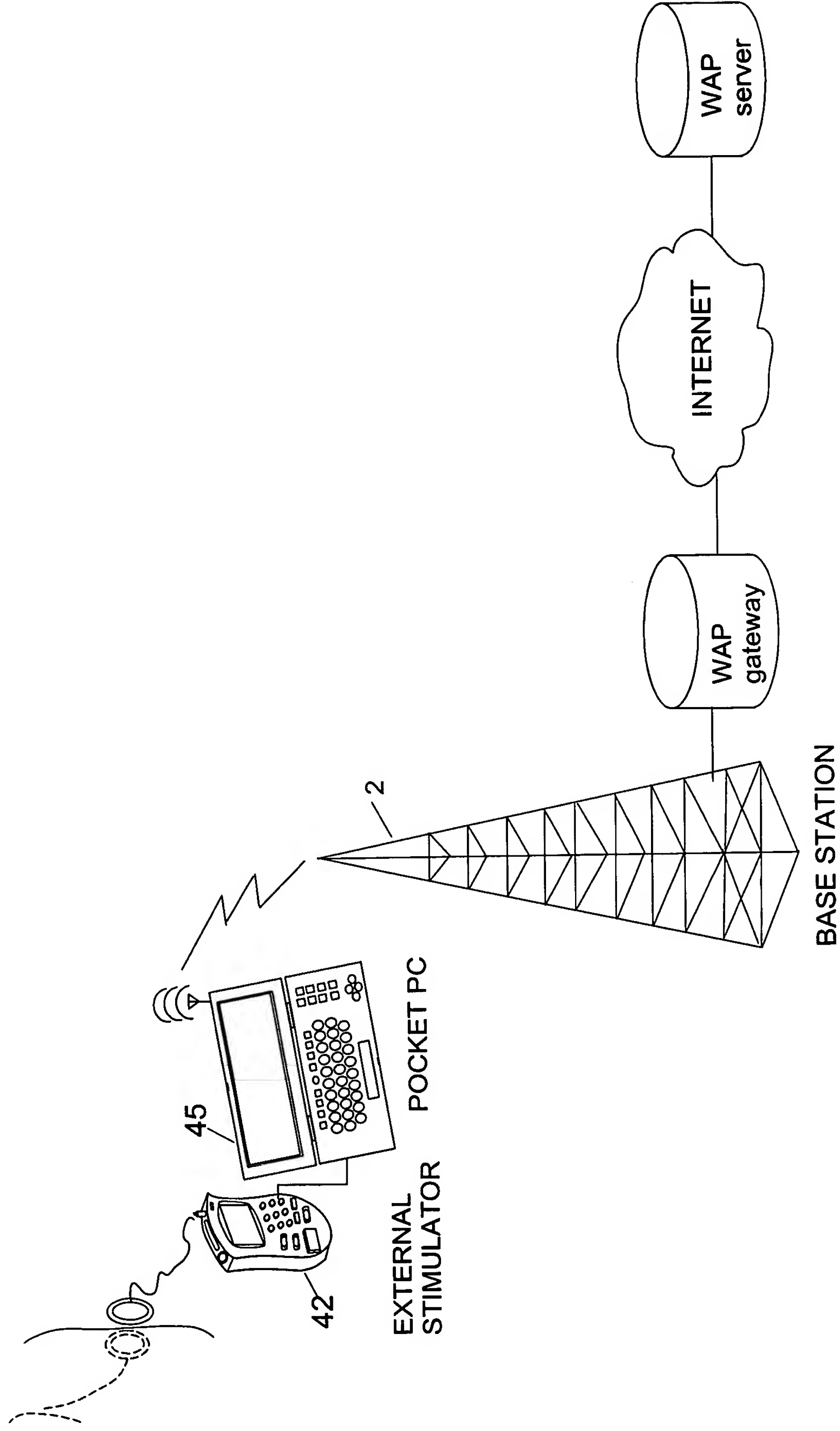


FIG. 9A

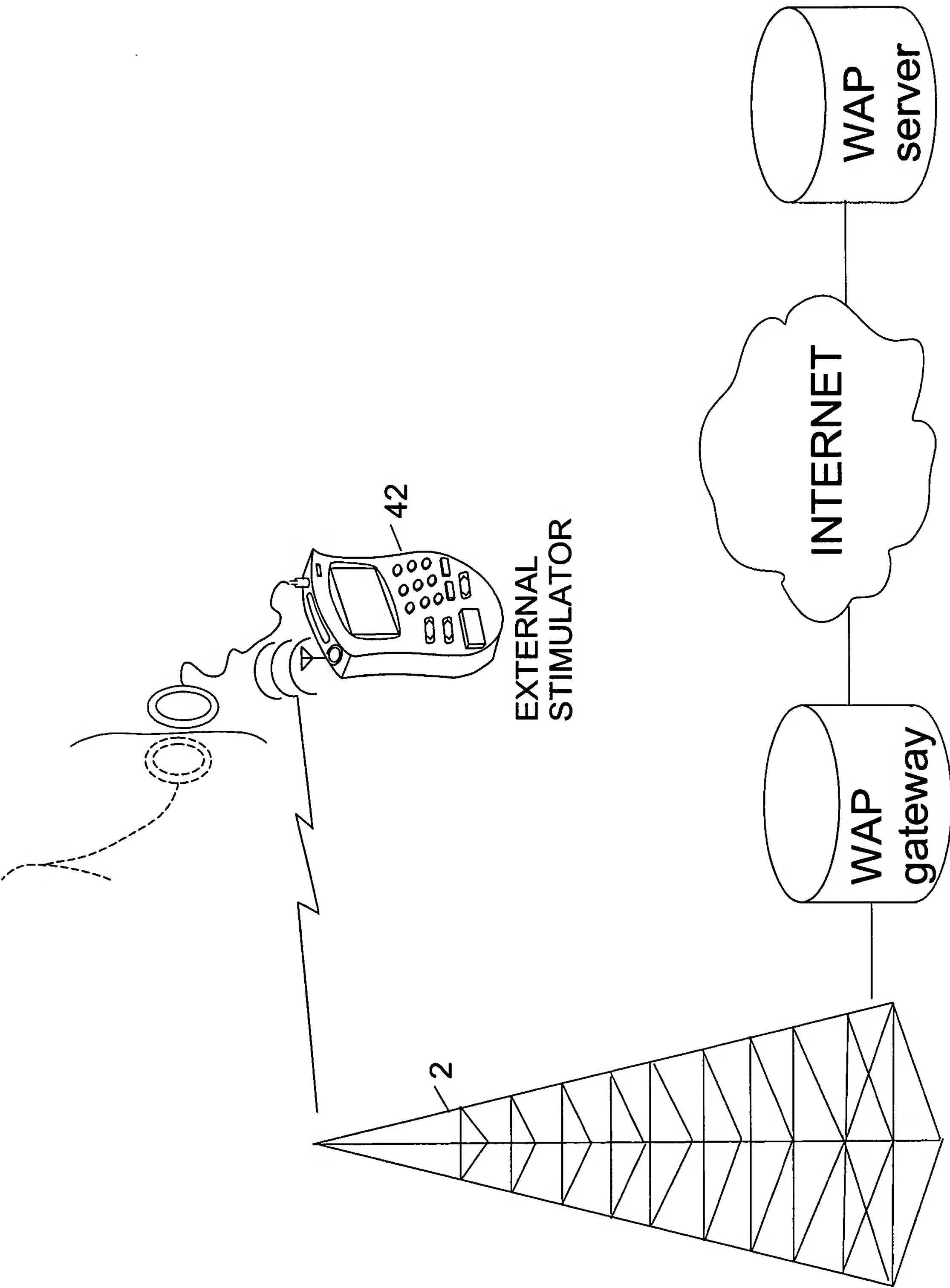


FIG. 9B

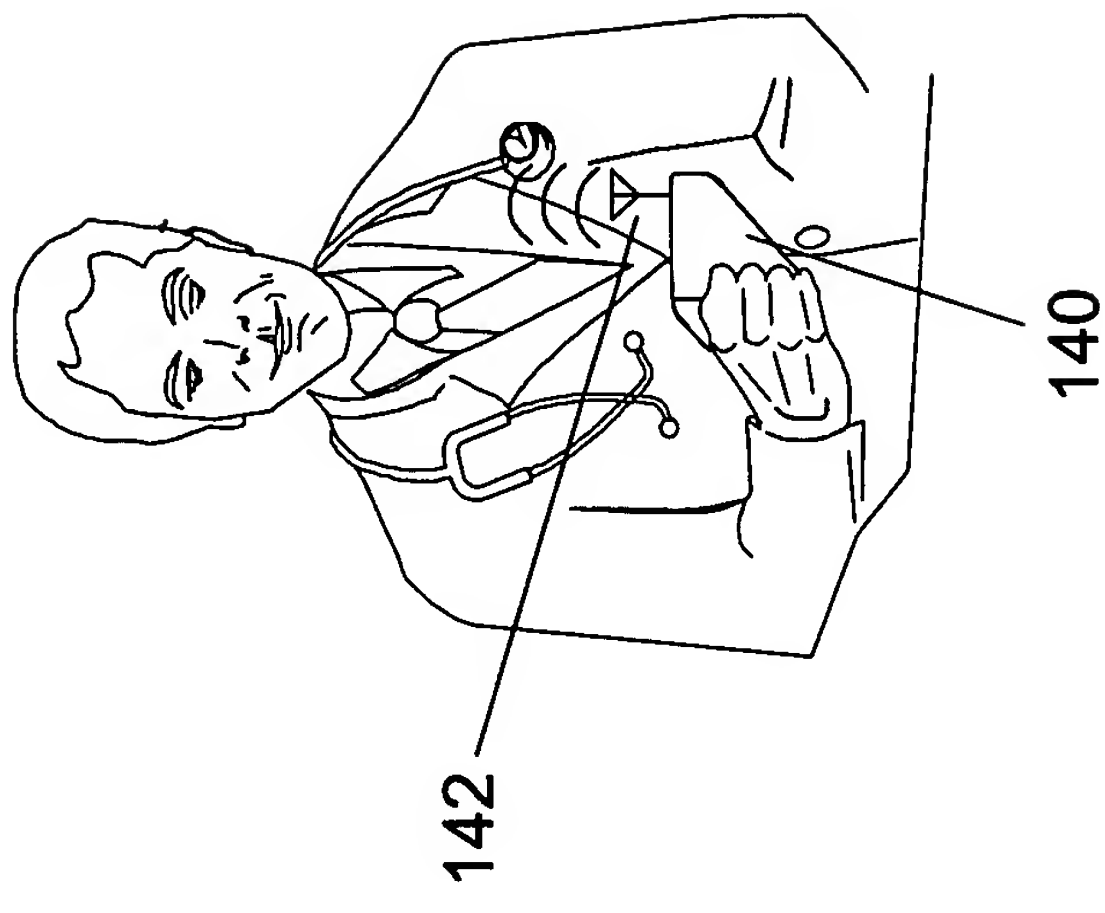
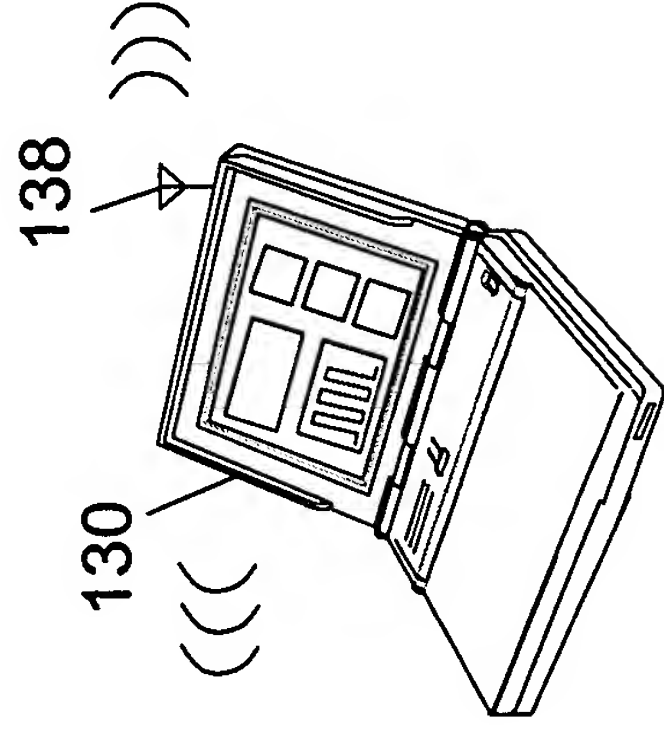
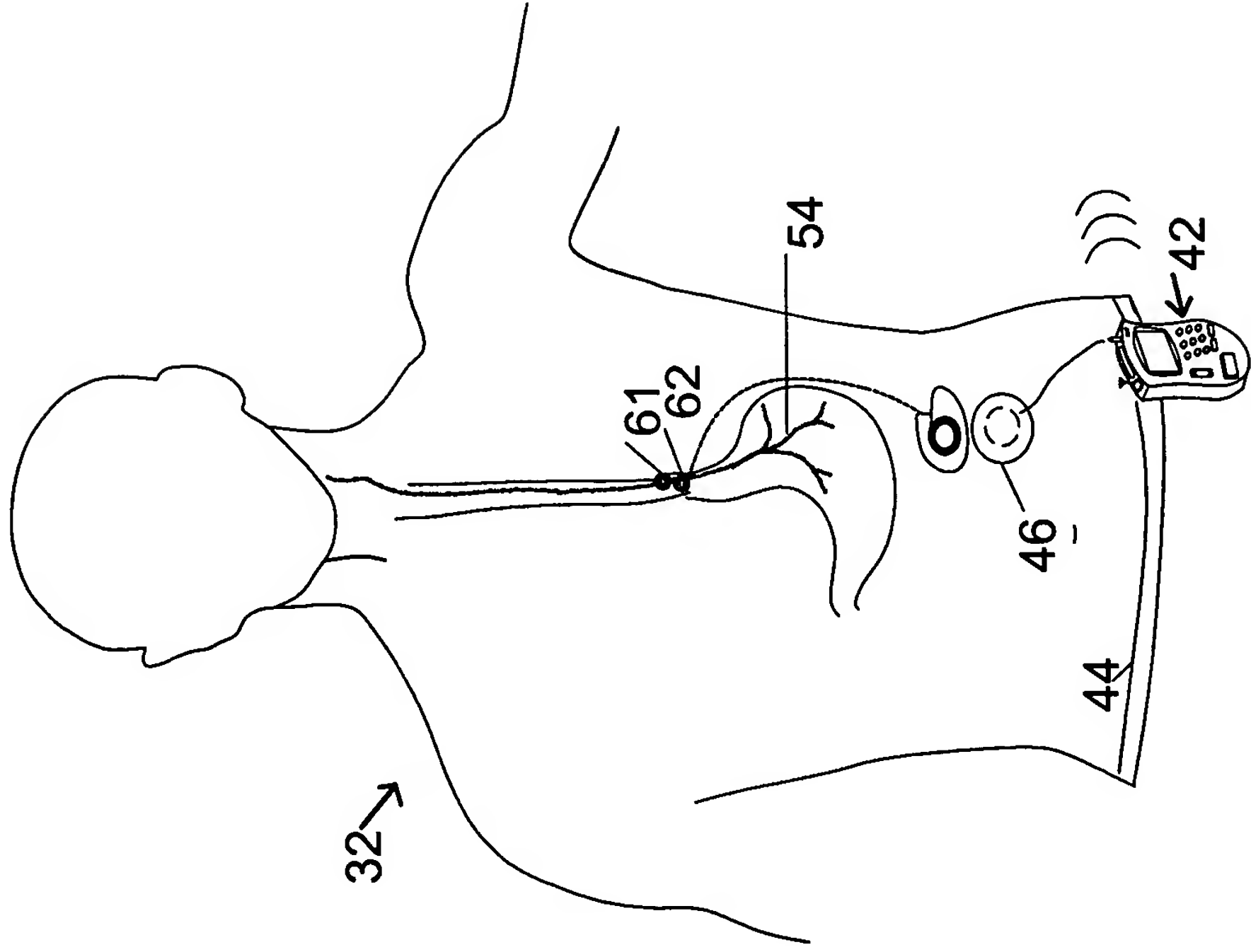


FIG. 10

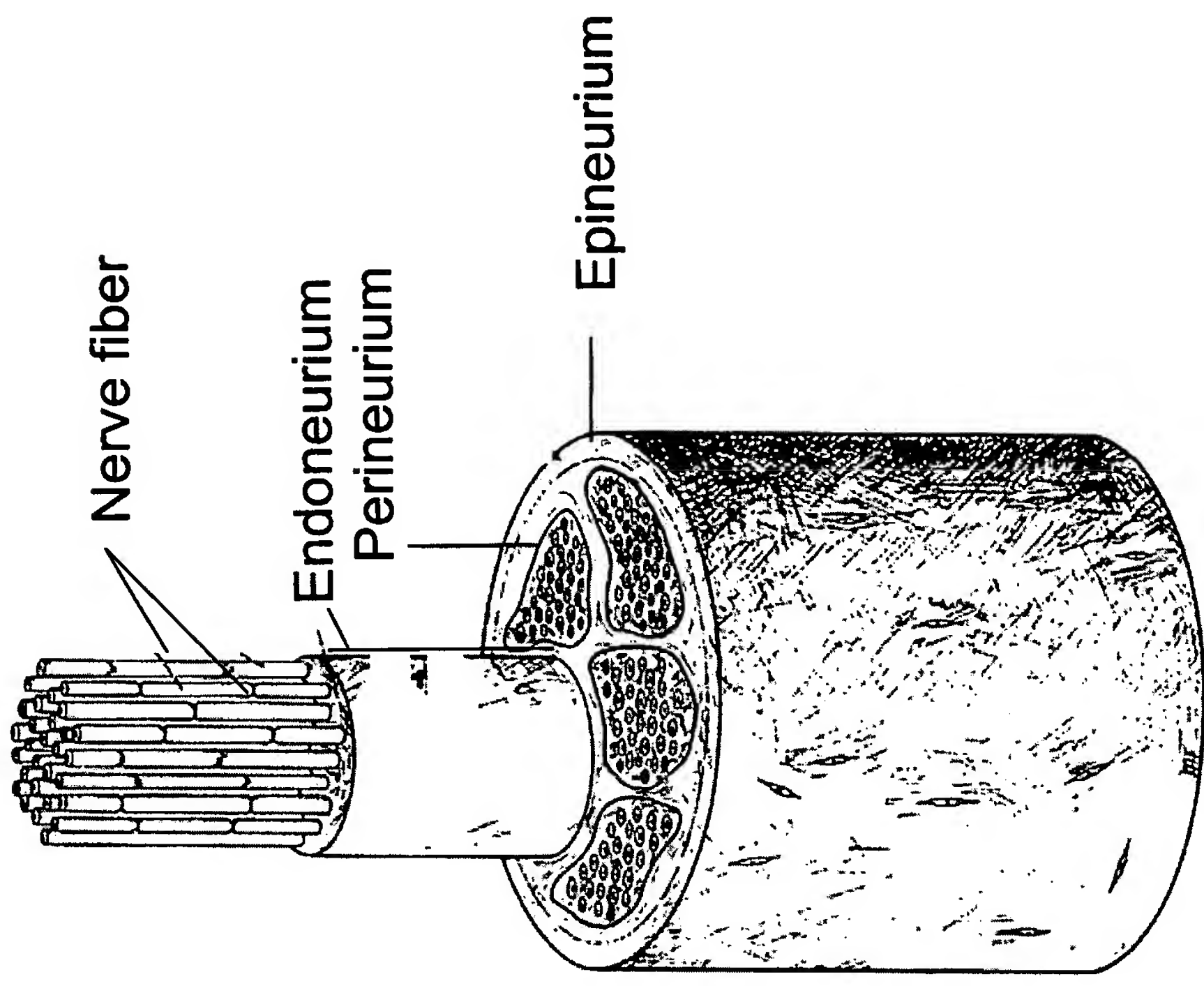


FIG. 11



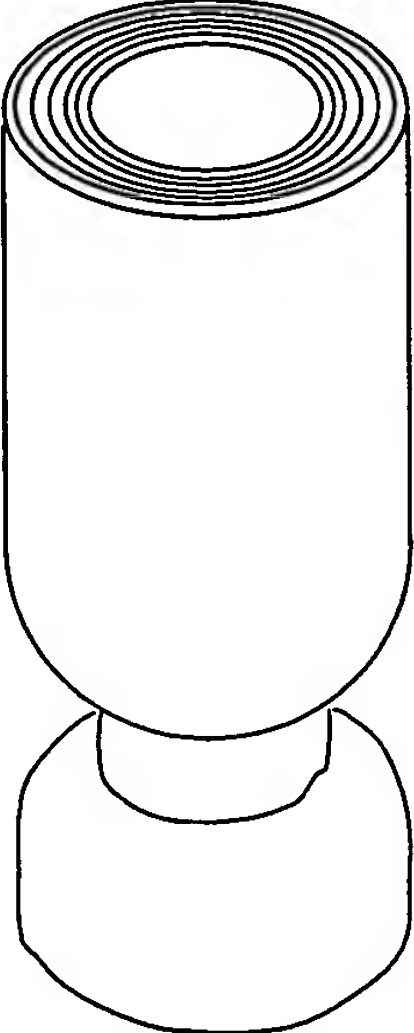
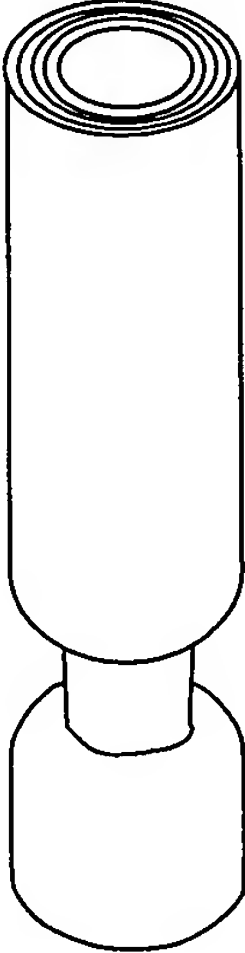


|                            |   |   |   |   |
|----------------------------|---|---|---|---|
| Axons from skin            | $A\alpha$   | $A\beta$  | $A\delta$   | C   |
| Axons from muscles         | Group I   | II  | III   | IV  |
|                            |  |  |  |  |
| Diameter ( $\mu\text{m}$ ) | 13- 20  | 6-12  | 1-5   | 0.2-1.5   |
| Speed (m/sec)              | 80-120  | 35-75   | 5-30  | 0.5-2   |
| Sensory receptors          | Proprio-<br>ceptors<br>of skeletal<br>muscle  | Mechano-<br>receptors<br>of skin  | Pain<br>tempe-<br>rature  | Tempe-<br>rature,<br>pain,<br>itch  |

FIG. 12

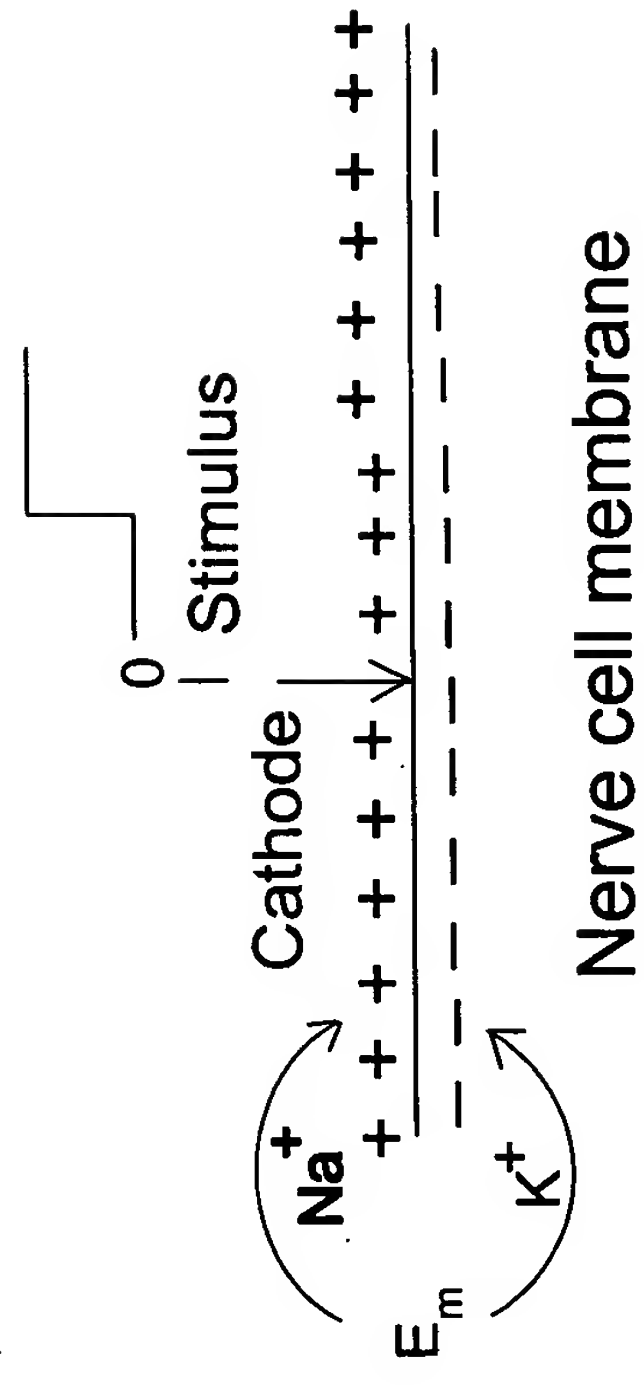


FIG. 13A

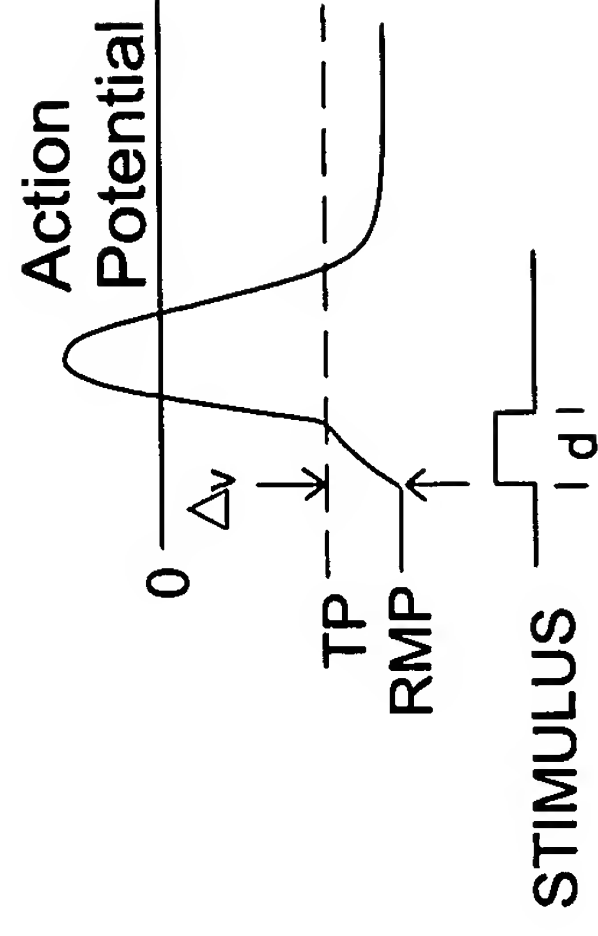


FIG. 13B

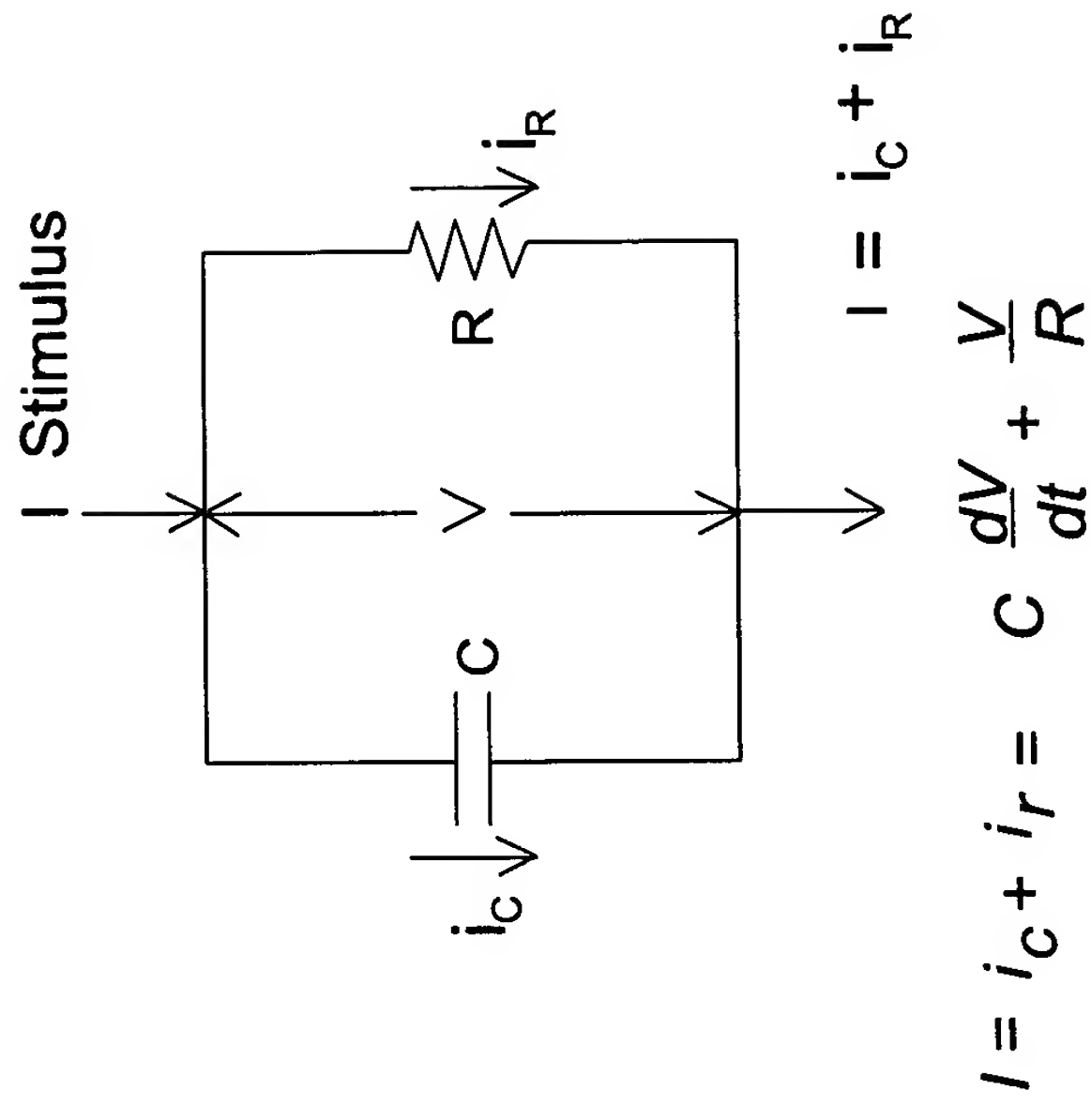


FIG. 13C

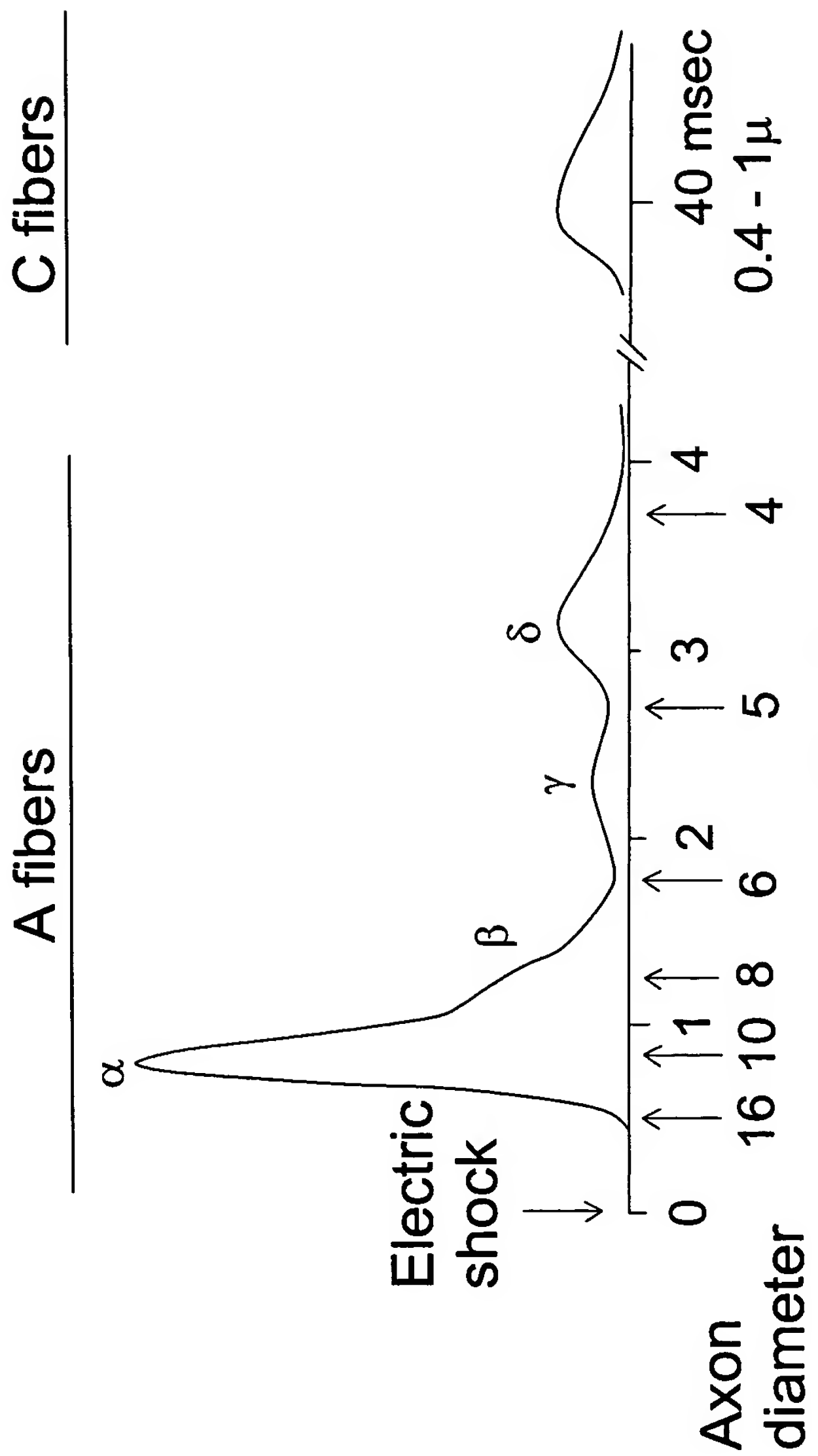
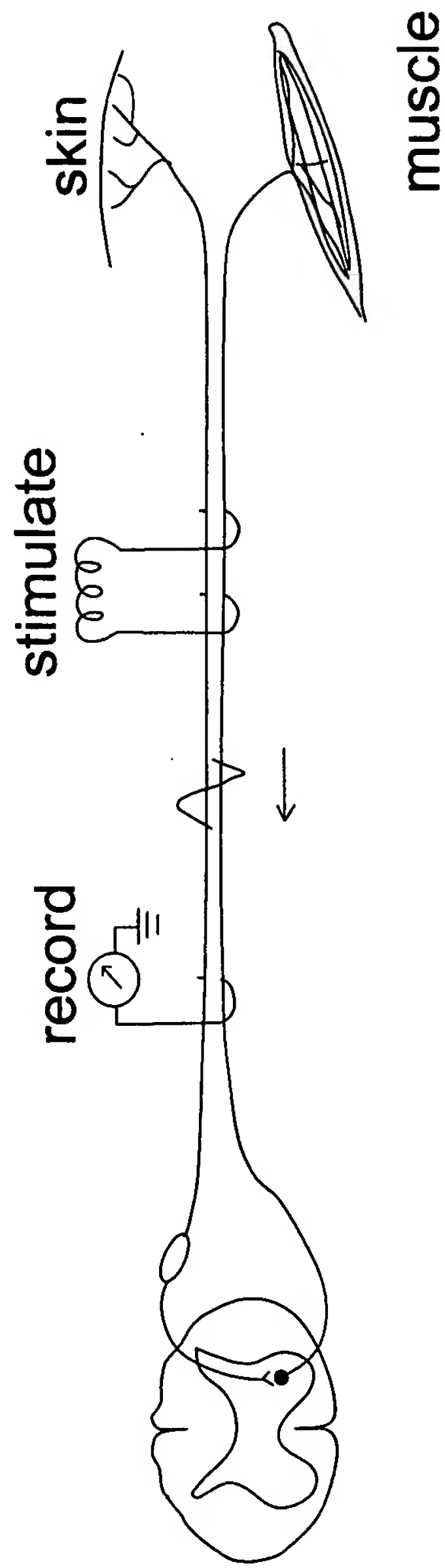
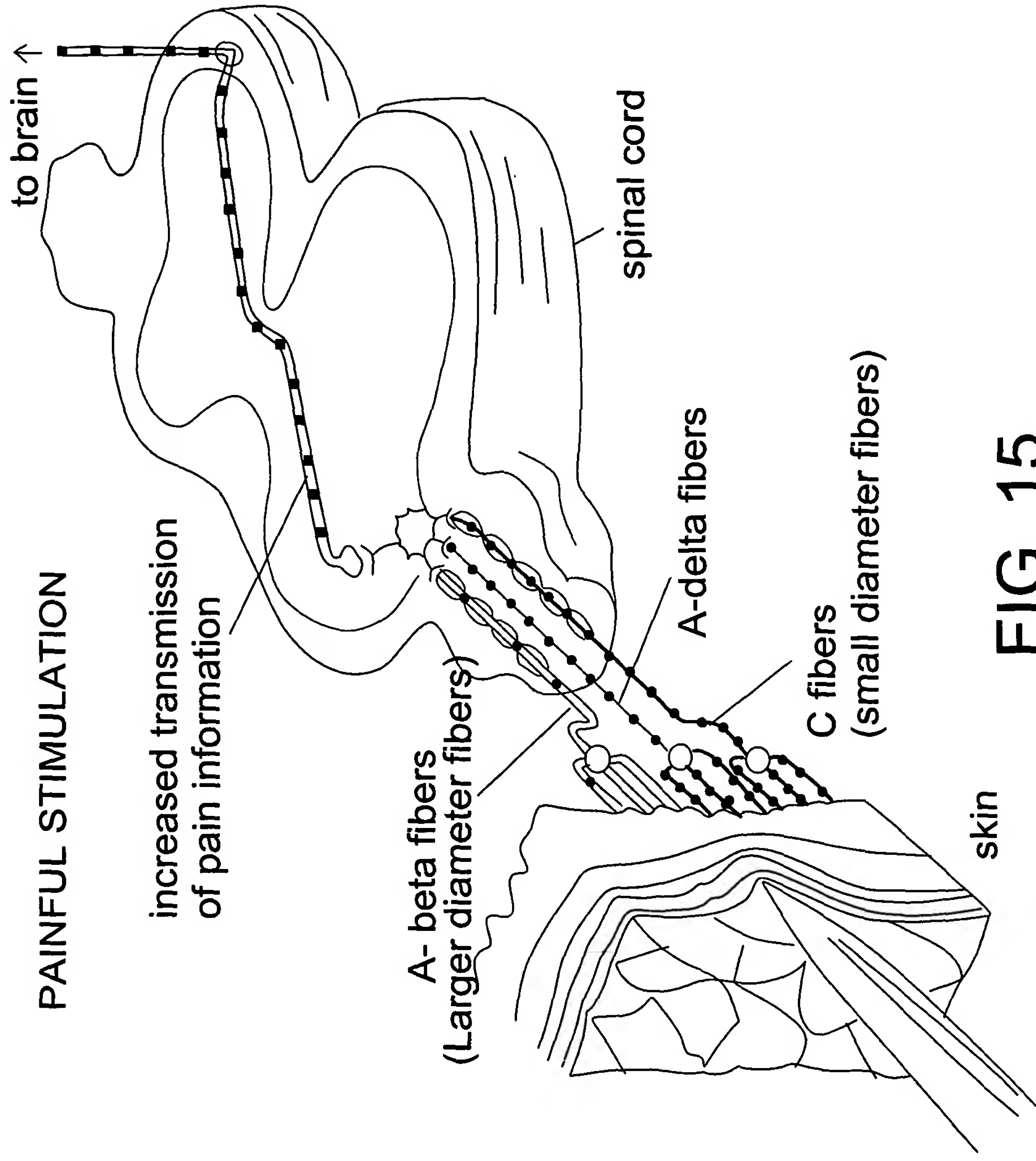
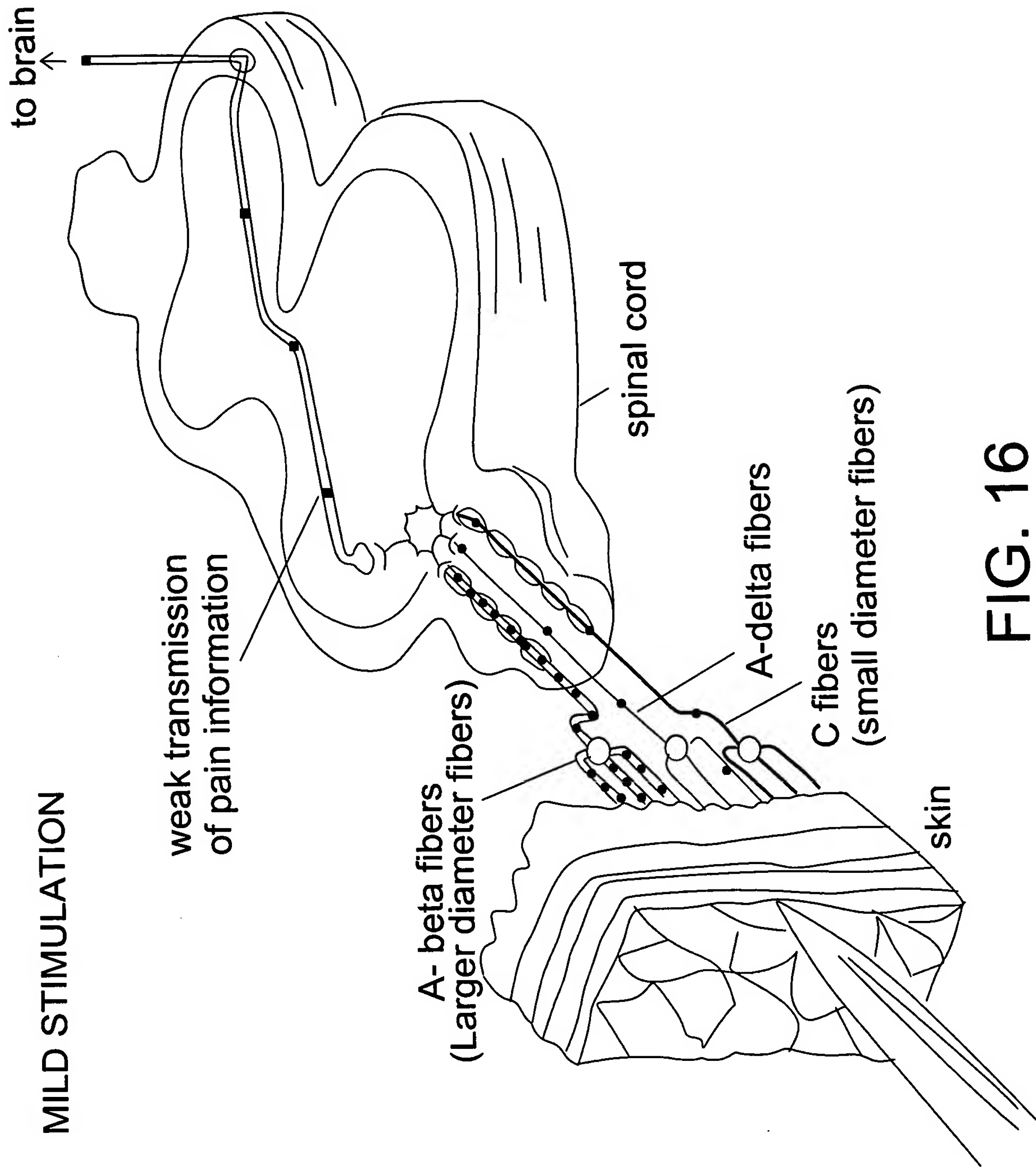


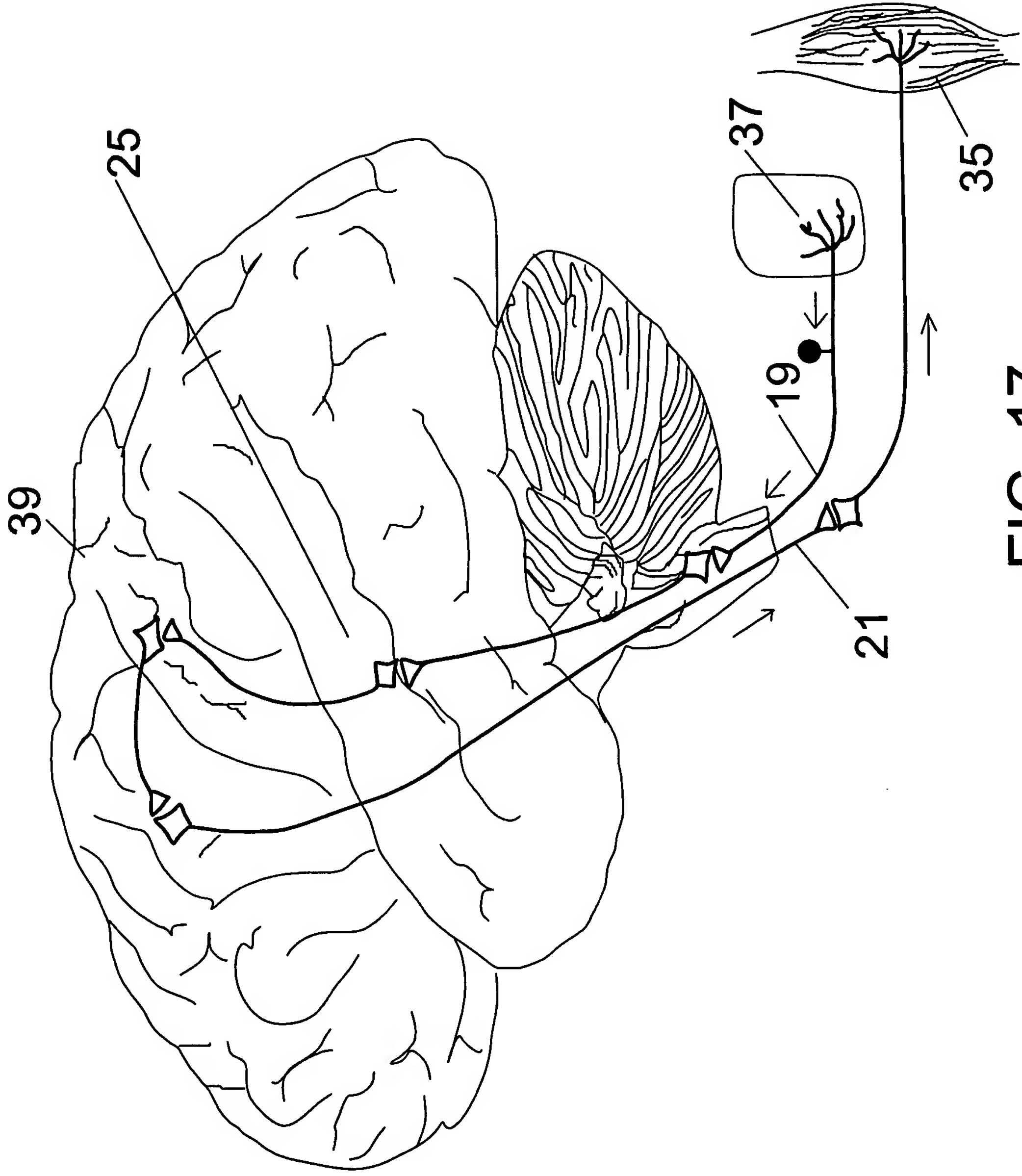
FIG. 14



**FIG. 15**



**FIG. 16**



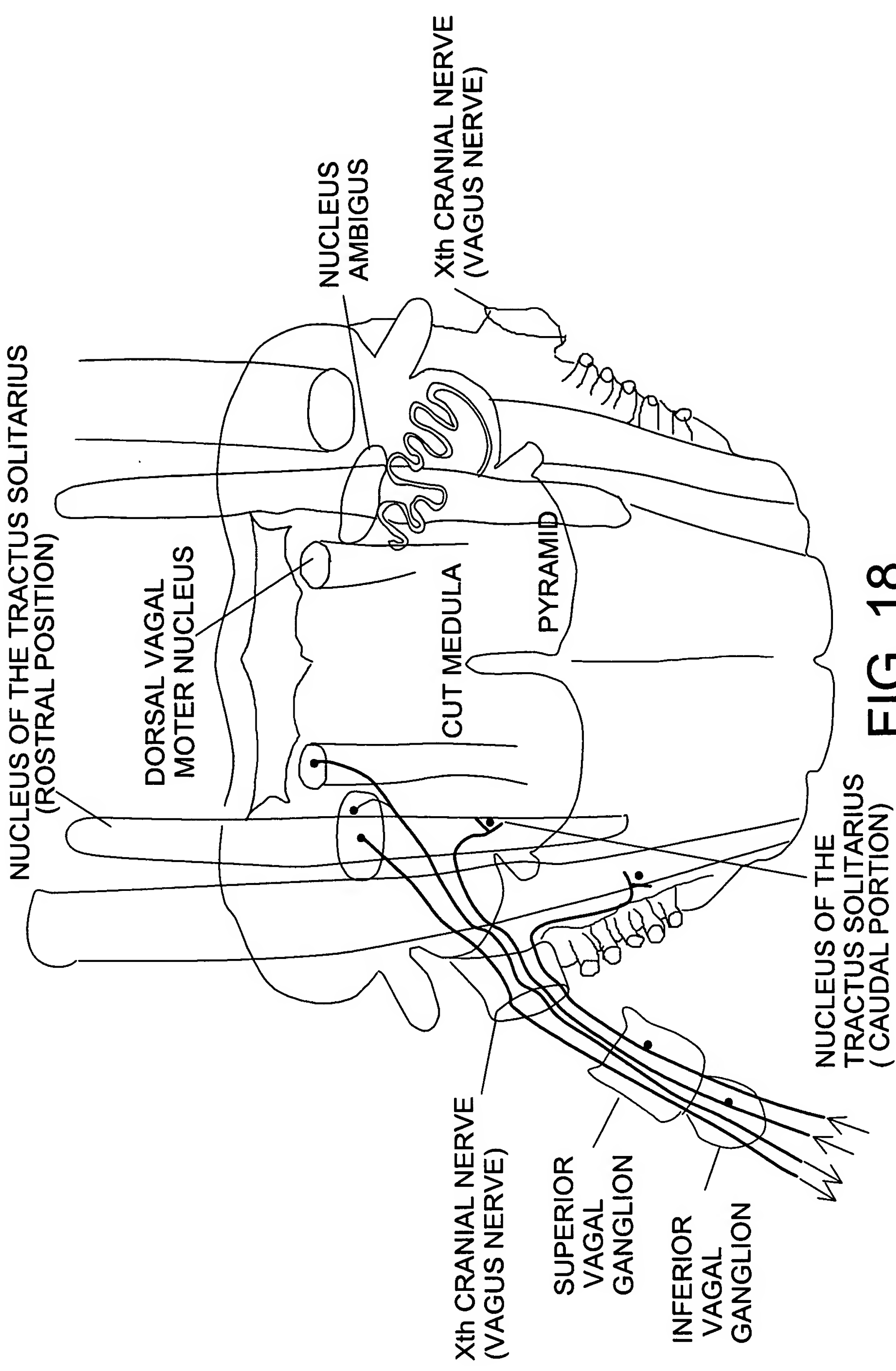


FIG. 18

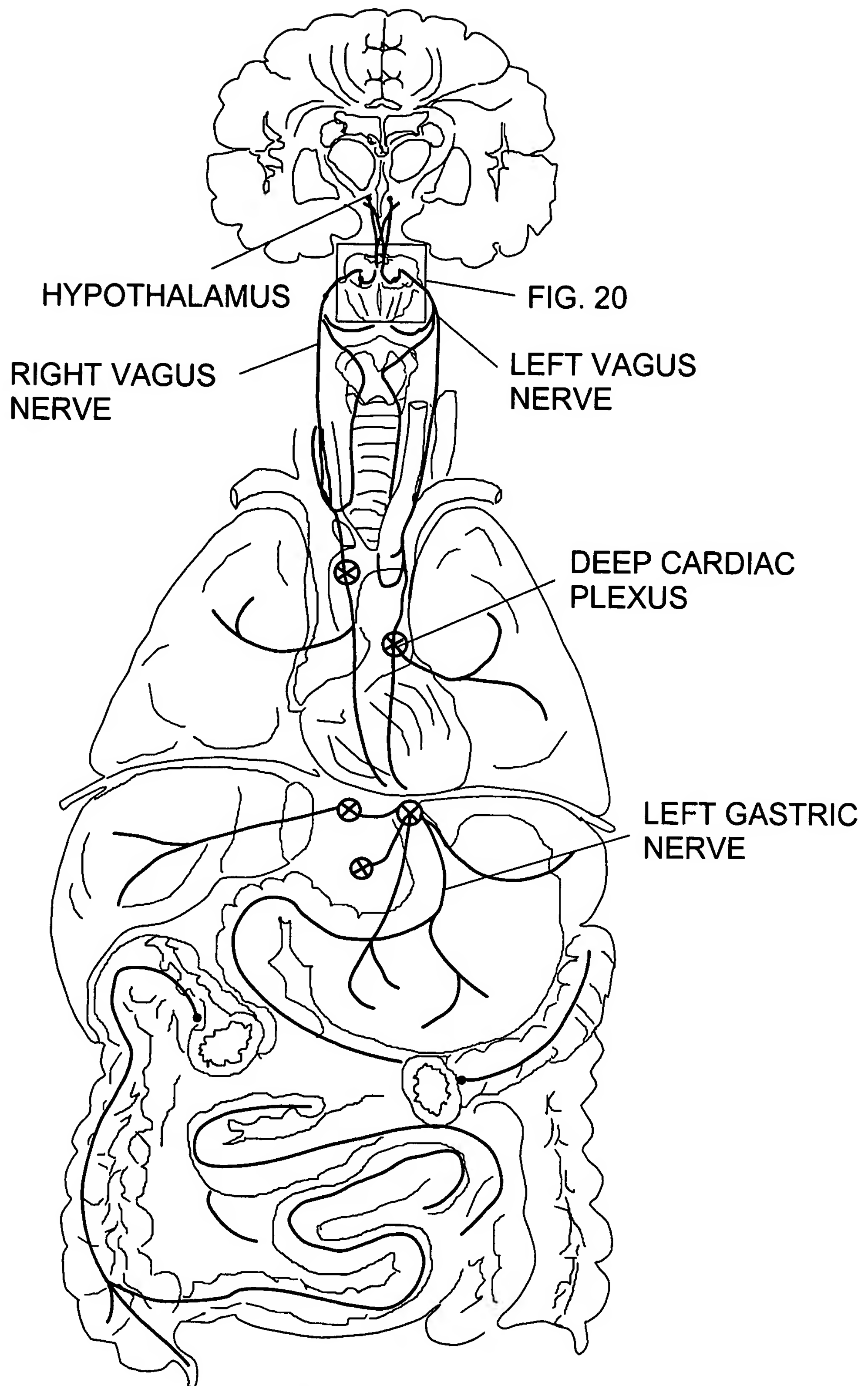


FIG. 20

FIG. 19



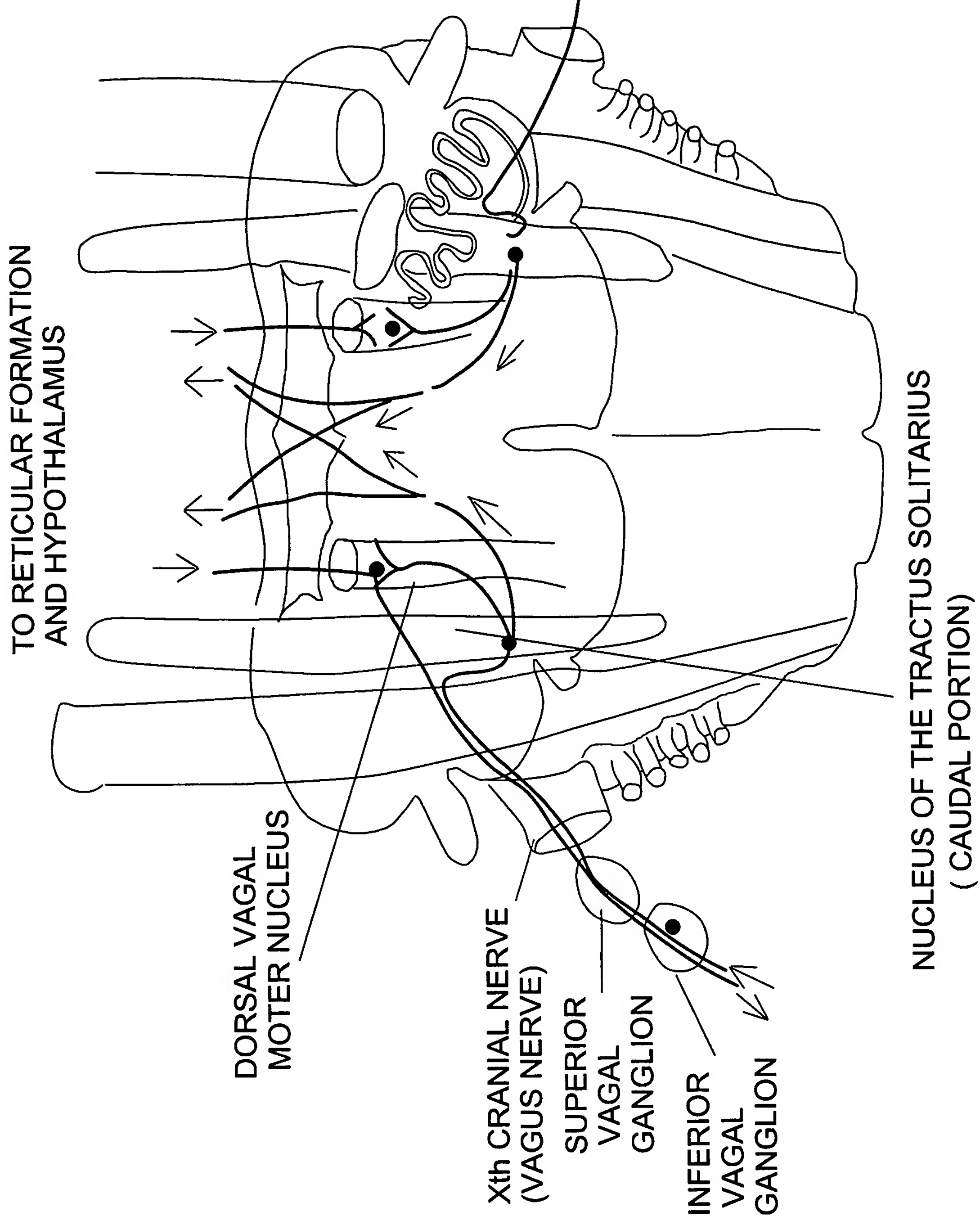


FIG. 20

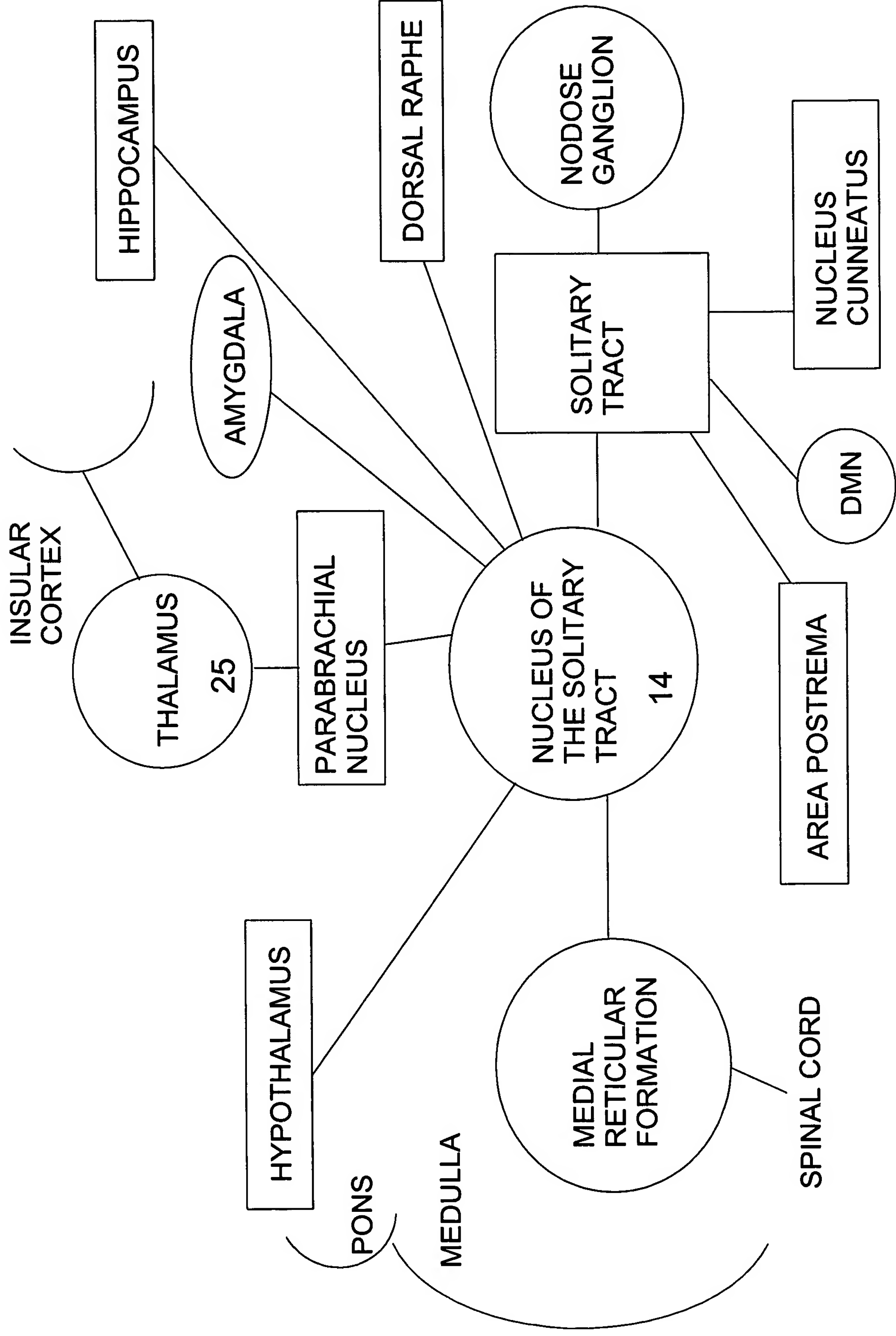


FIG. 21

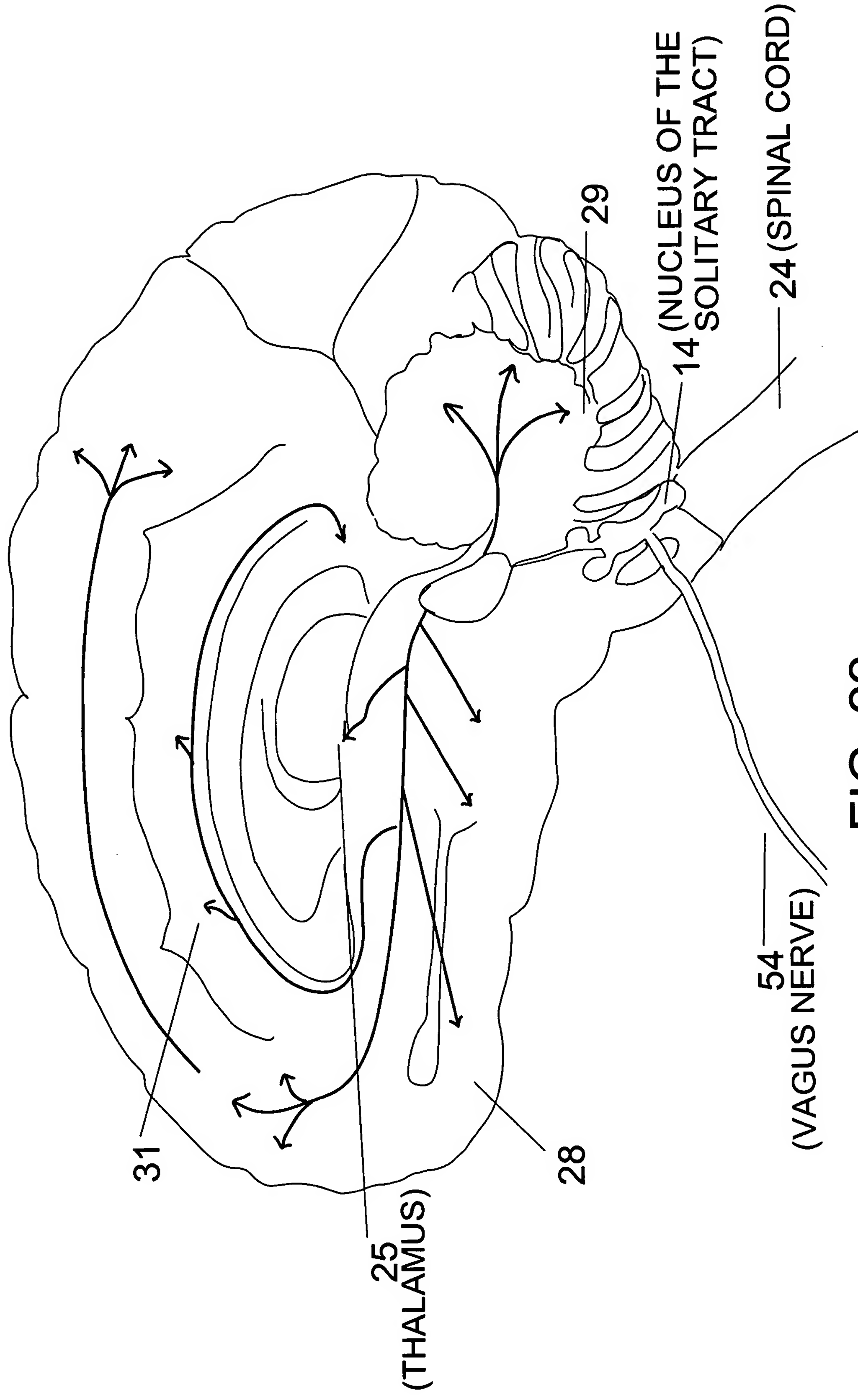
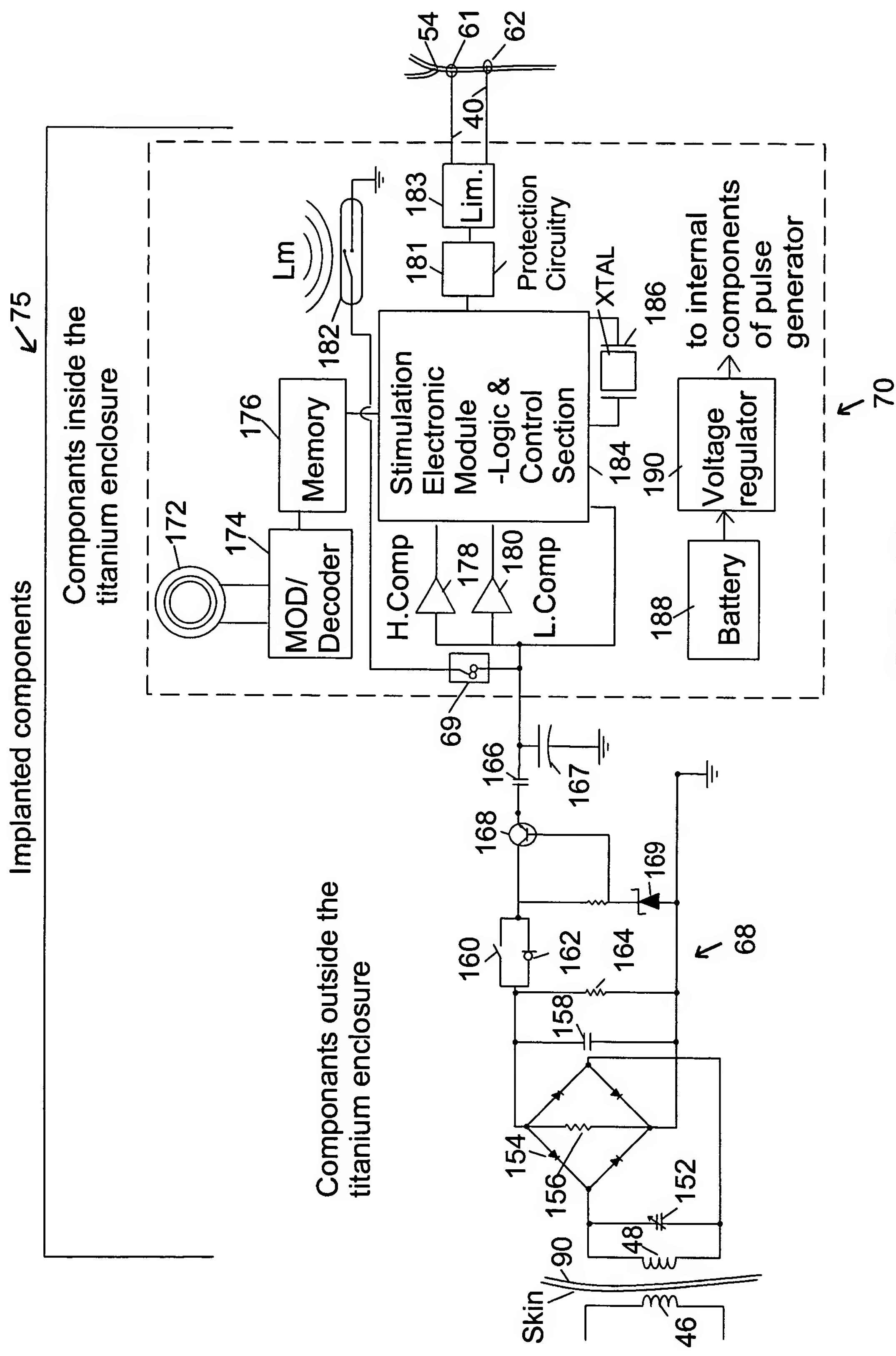


FIG. 22



**FIG. 23**

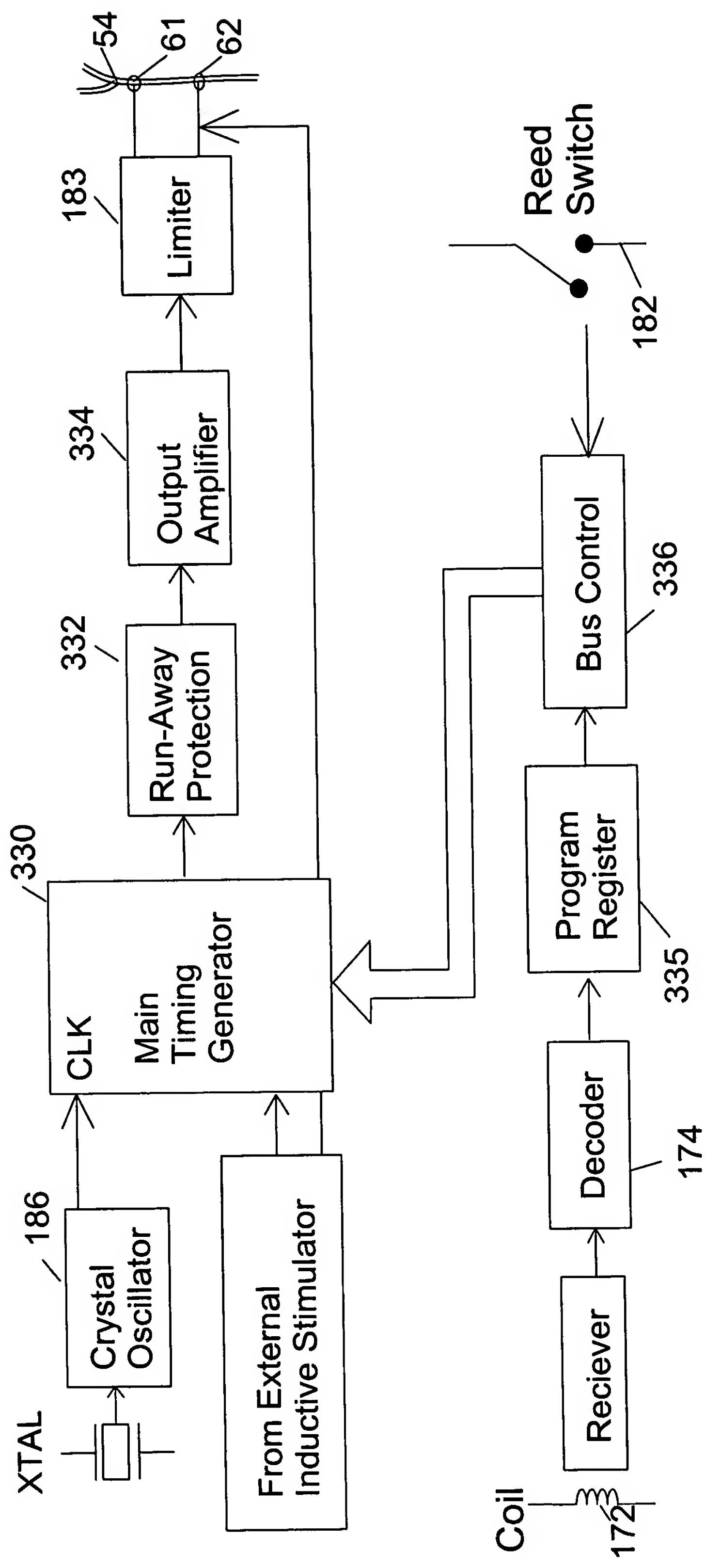


FIG. 24

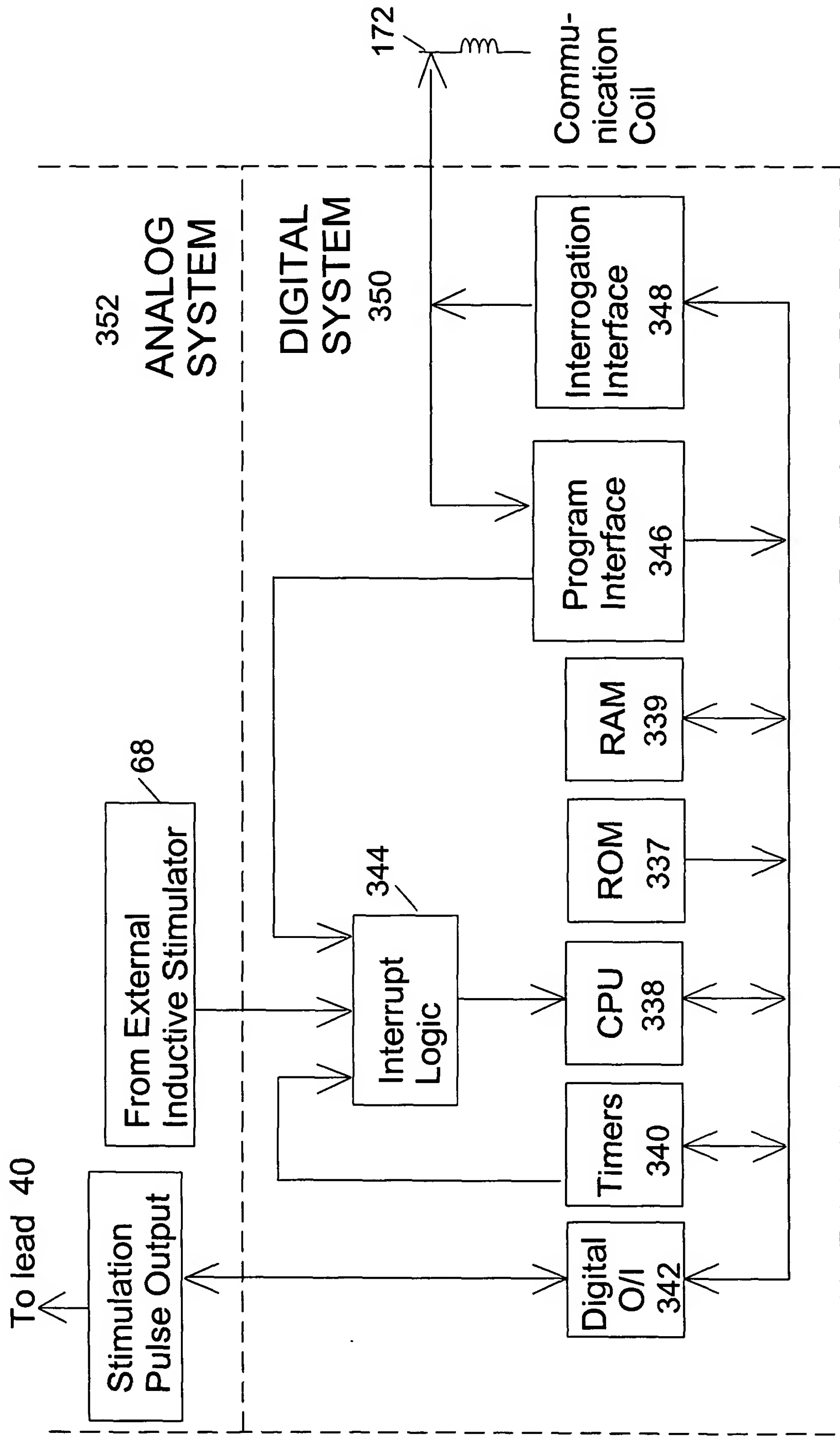


FIG. 25

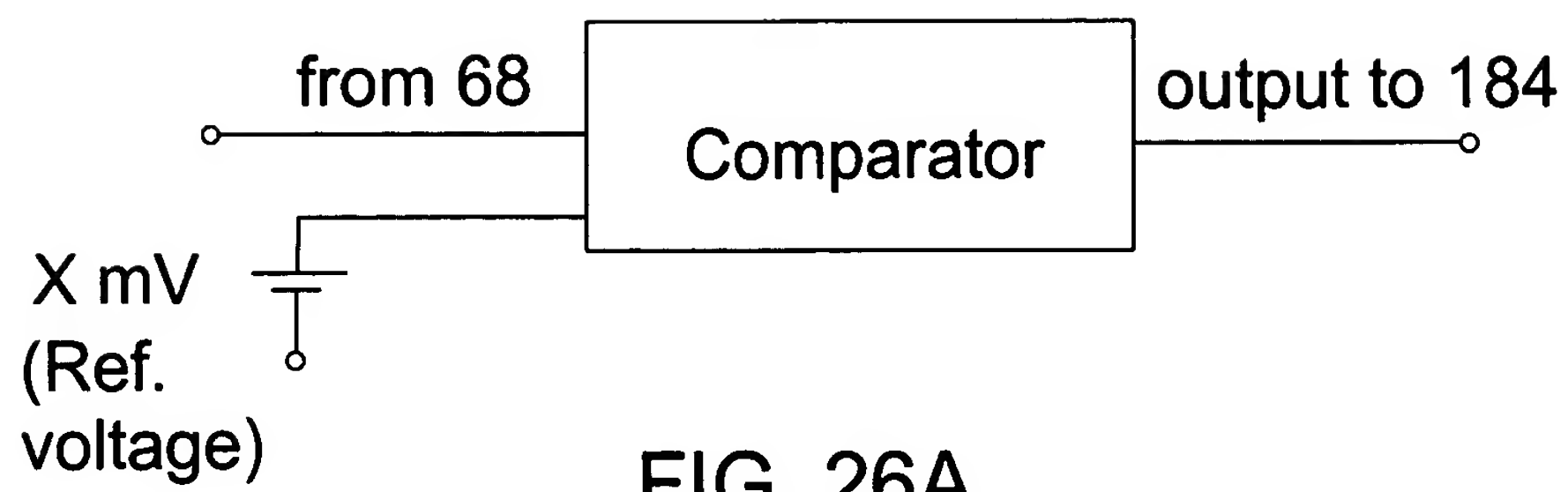


FIG. 26A

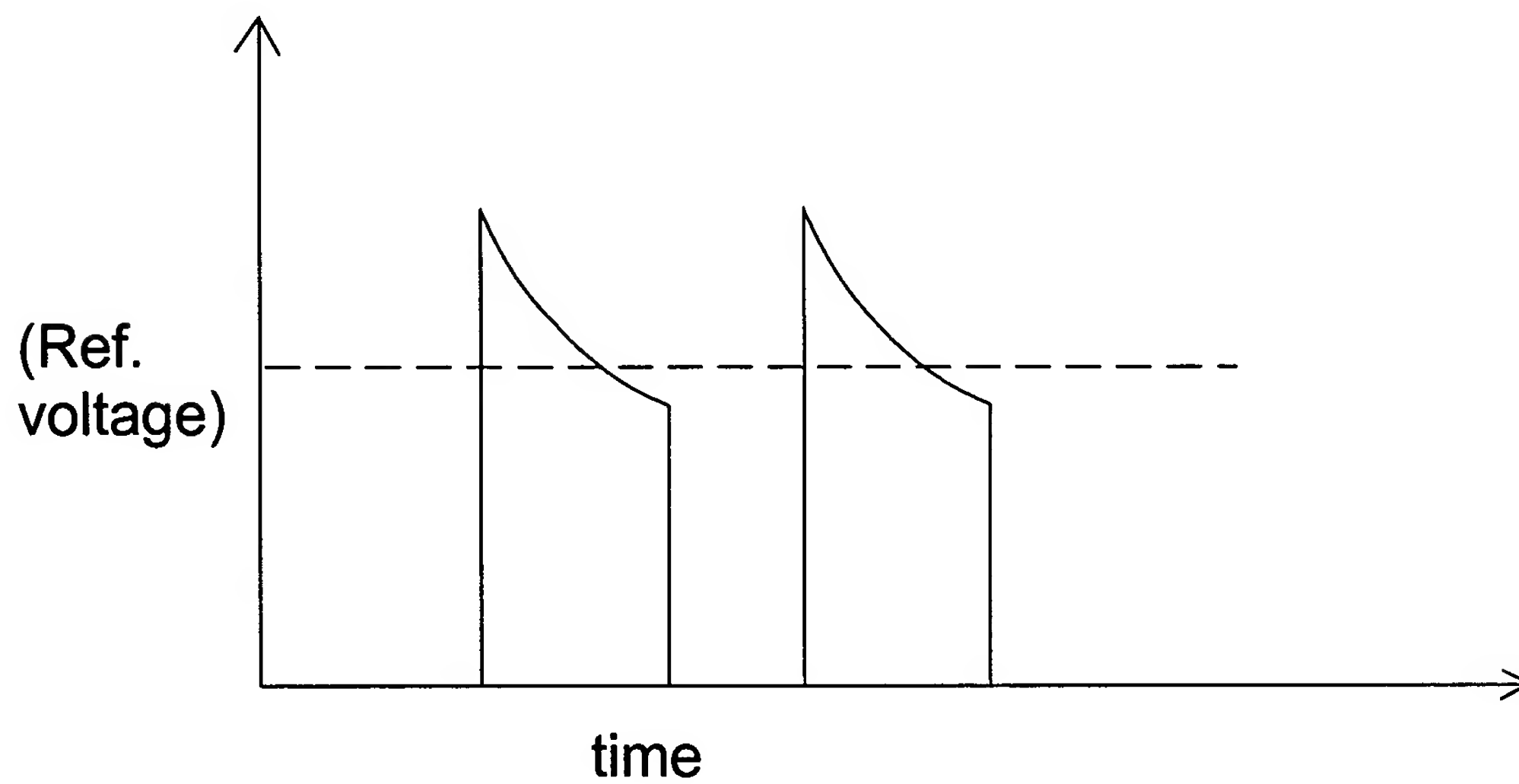


FIG. 26B

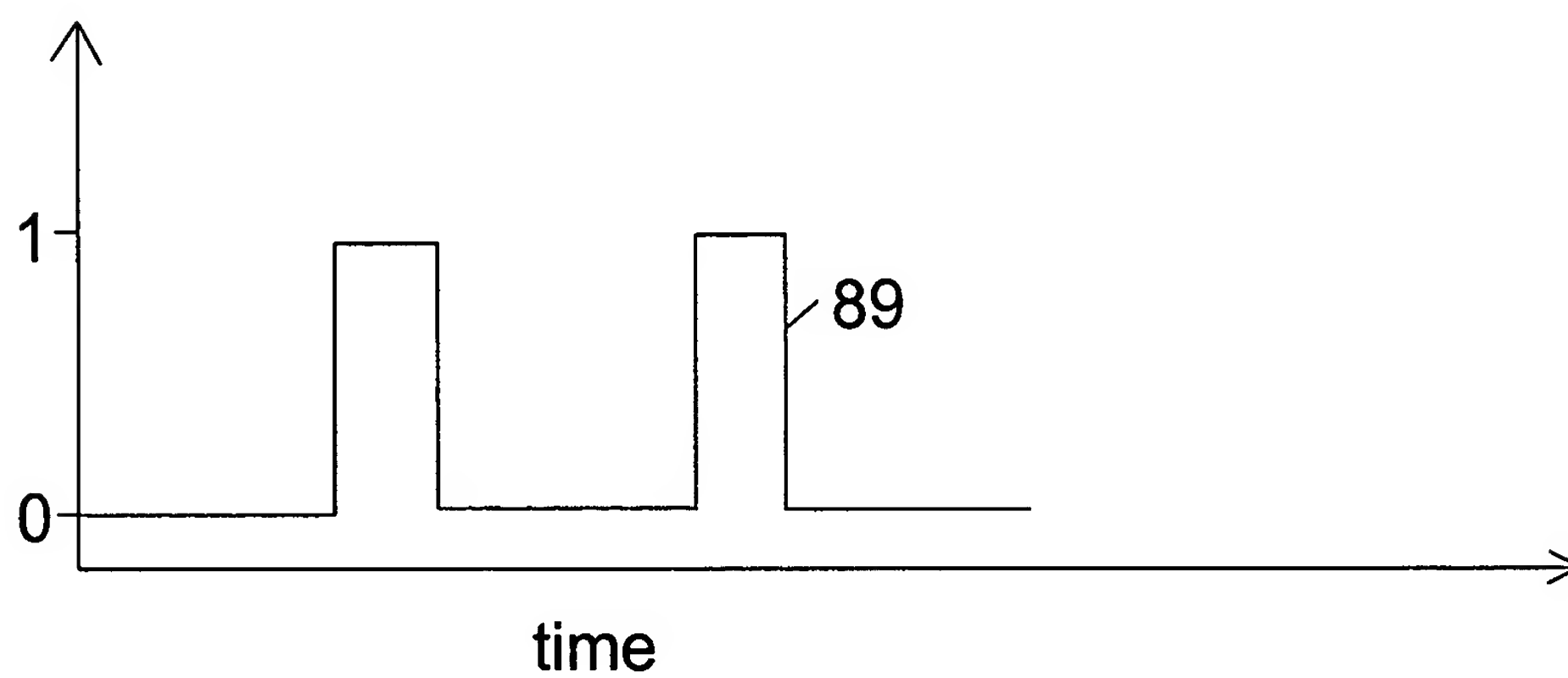


FIG. 26C

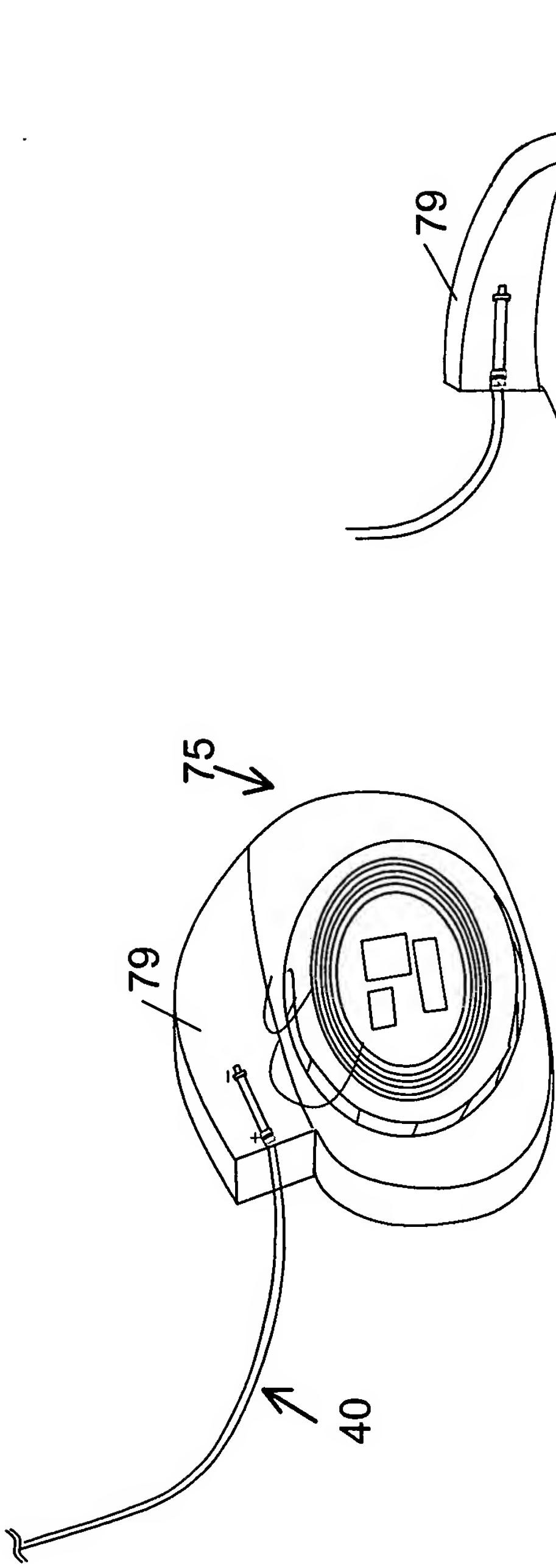


FIG. 27A

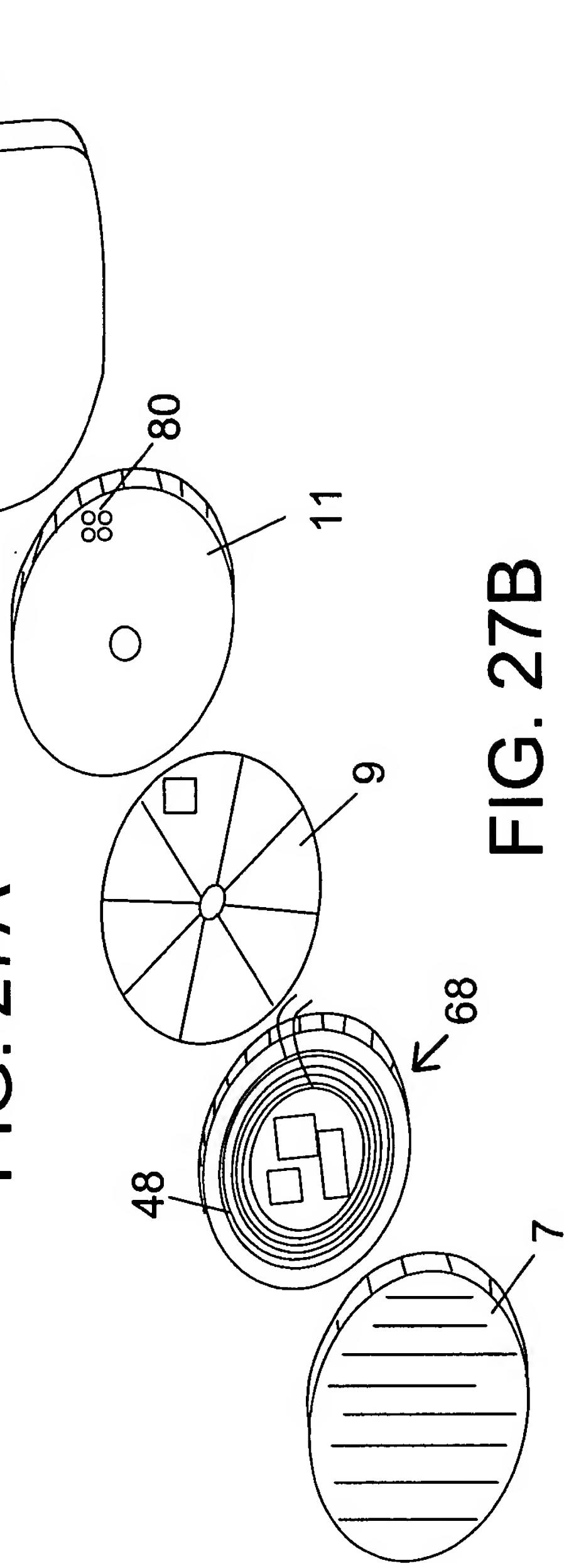


FIG. 27B



During programming

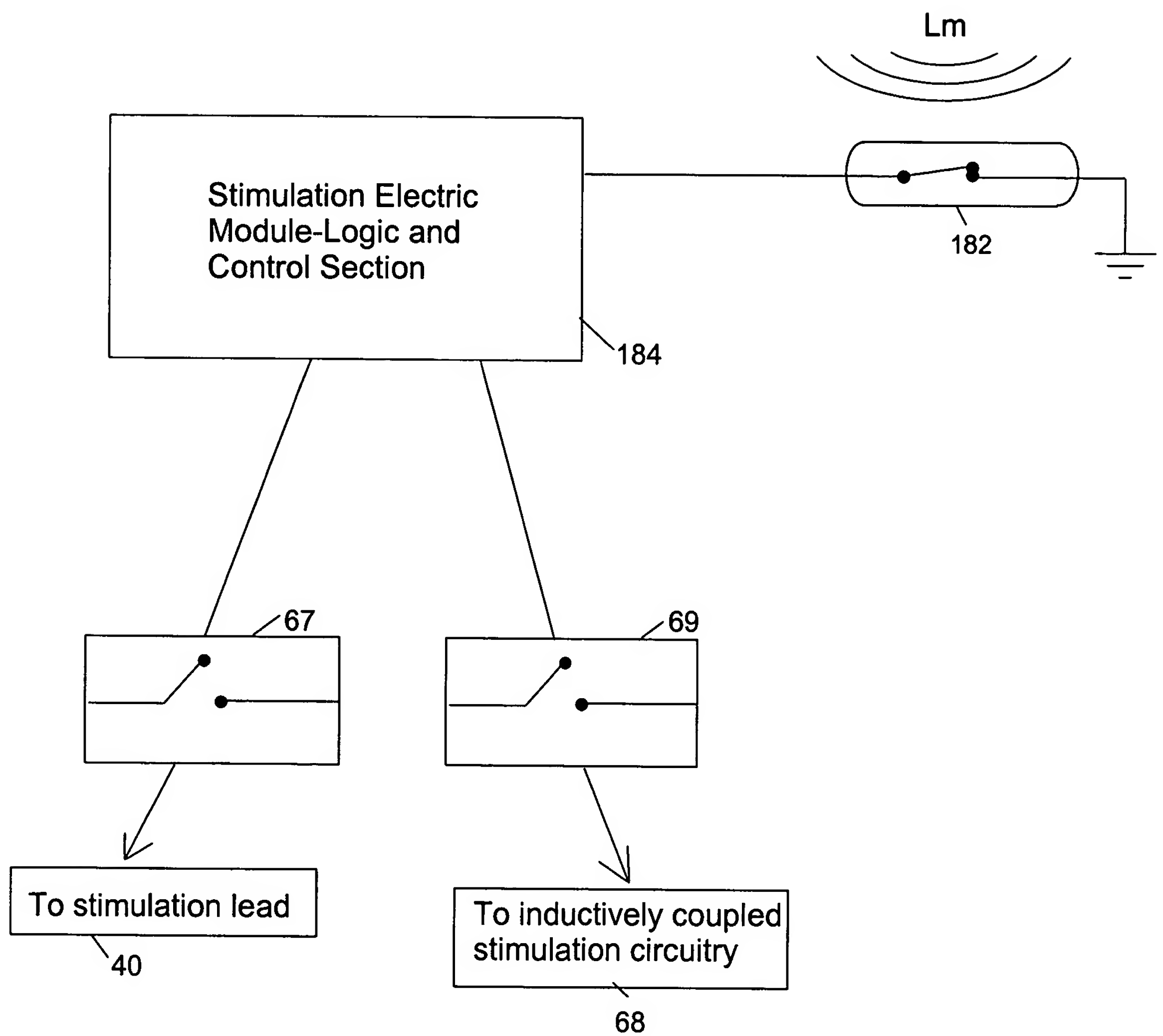


FIG. 28A

# During programming

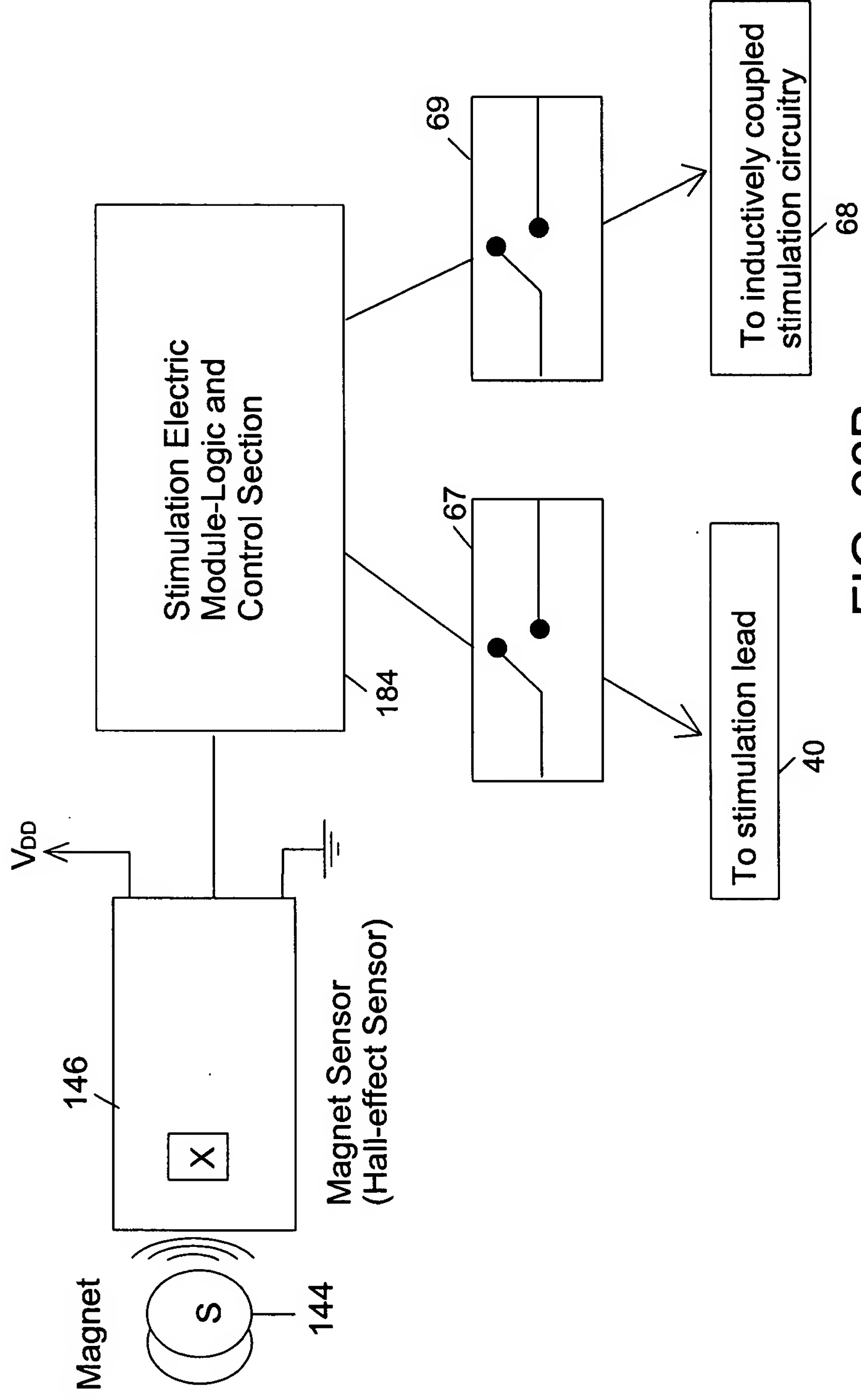


FIG. 28B

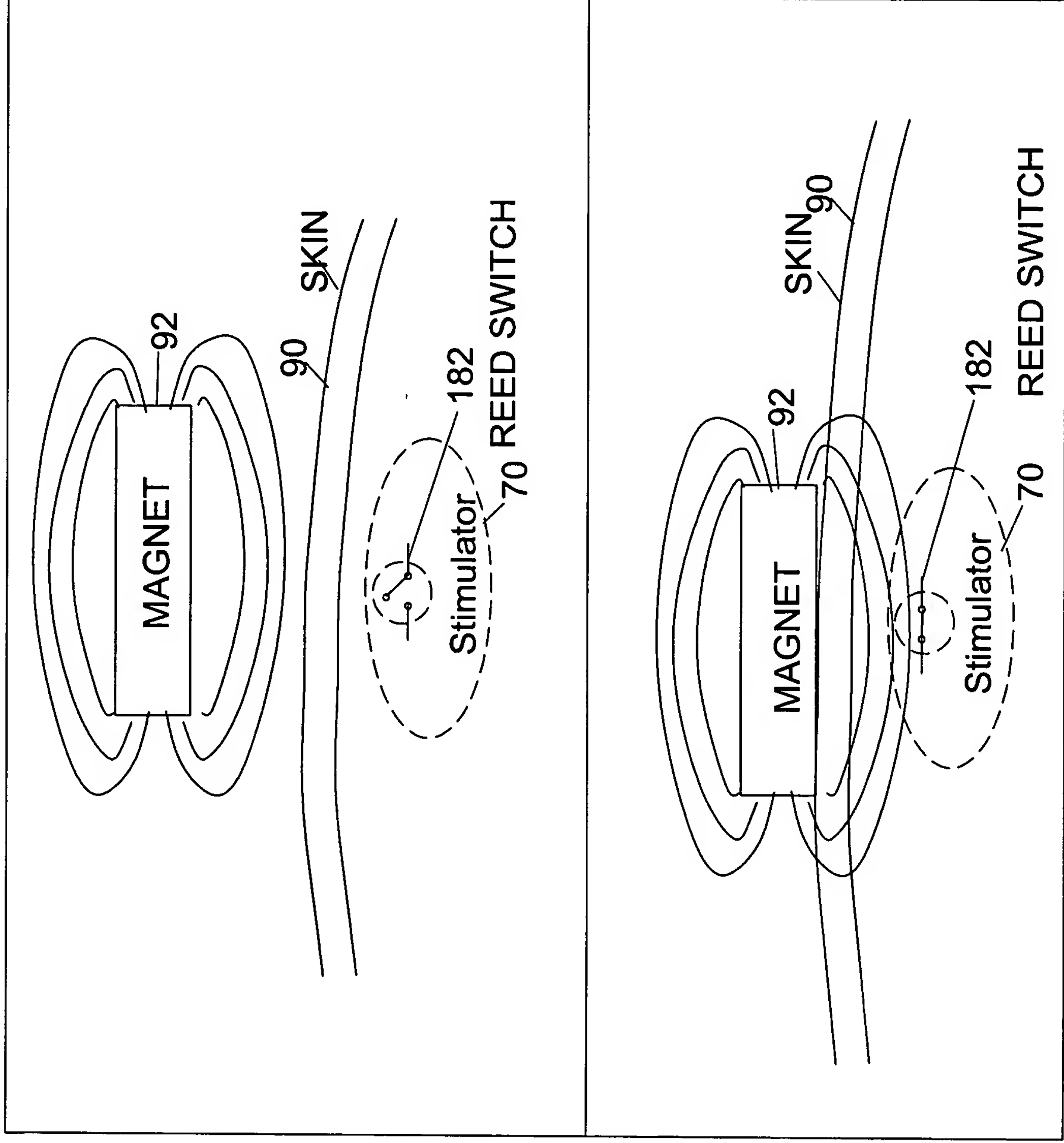


FIG. 29

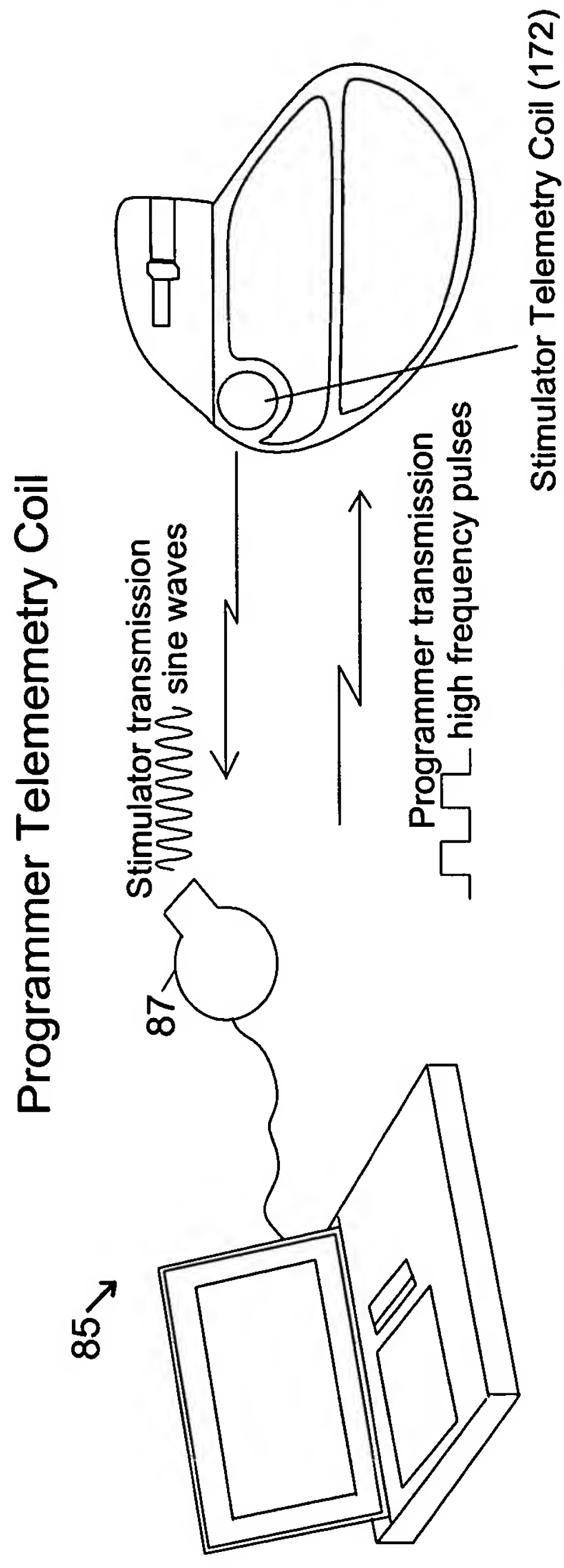


FIG. 30A

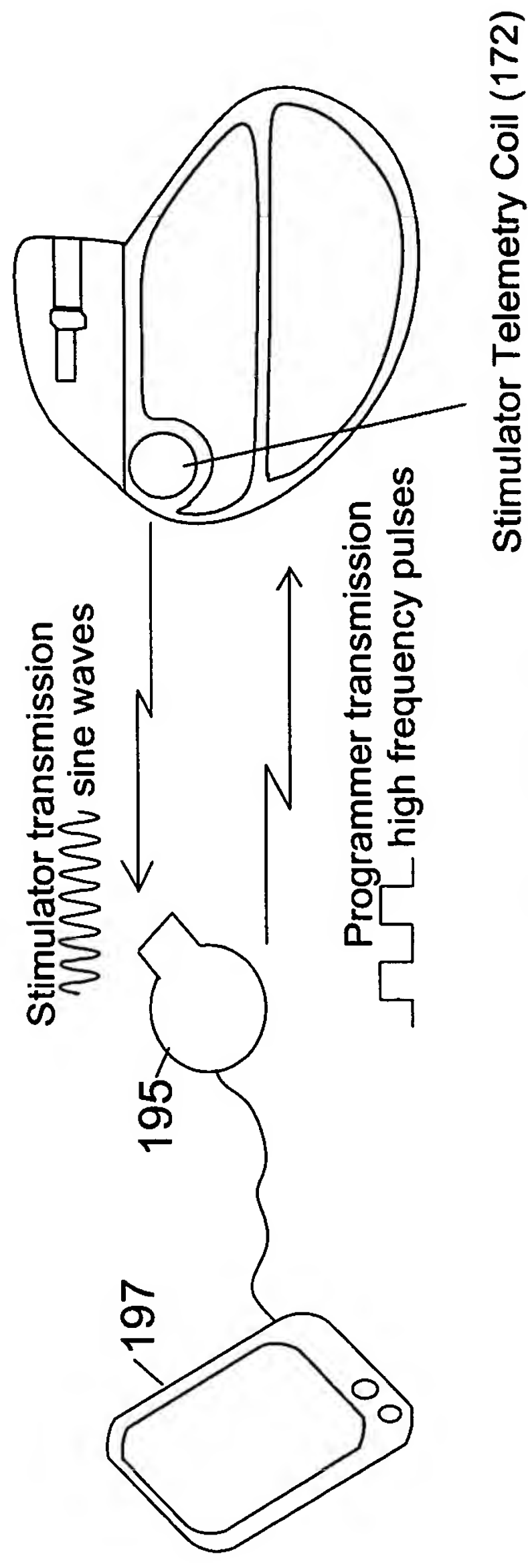
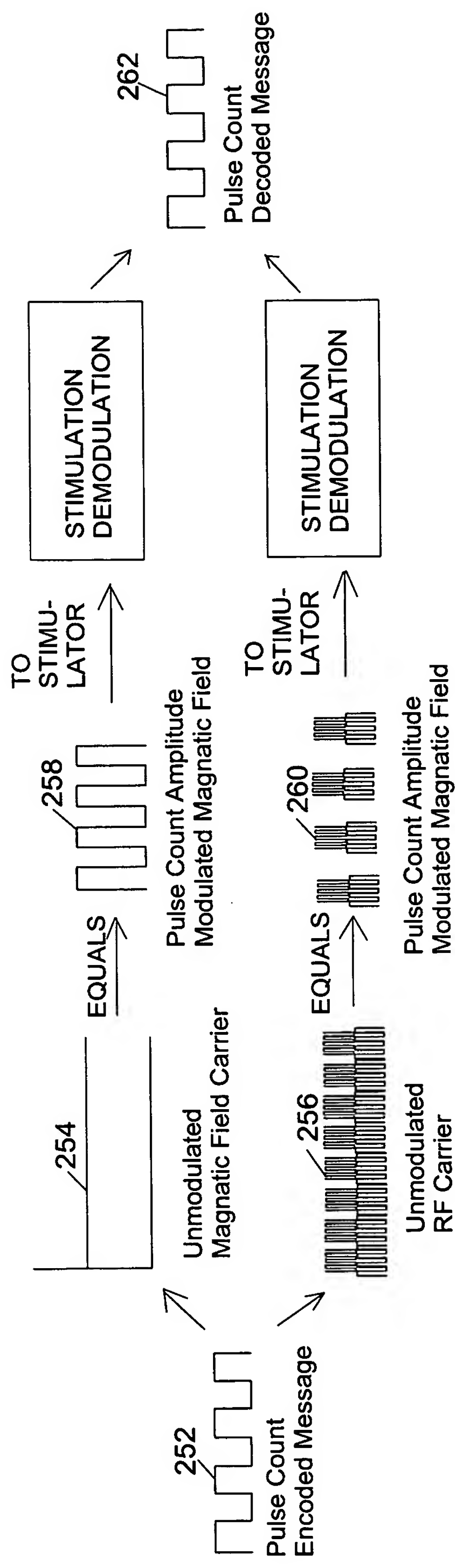
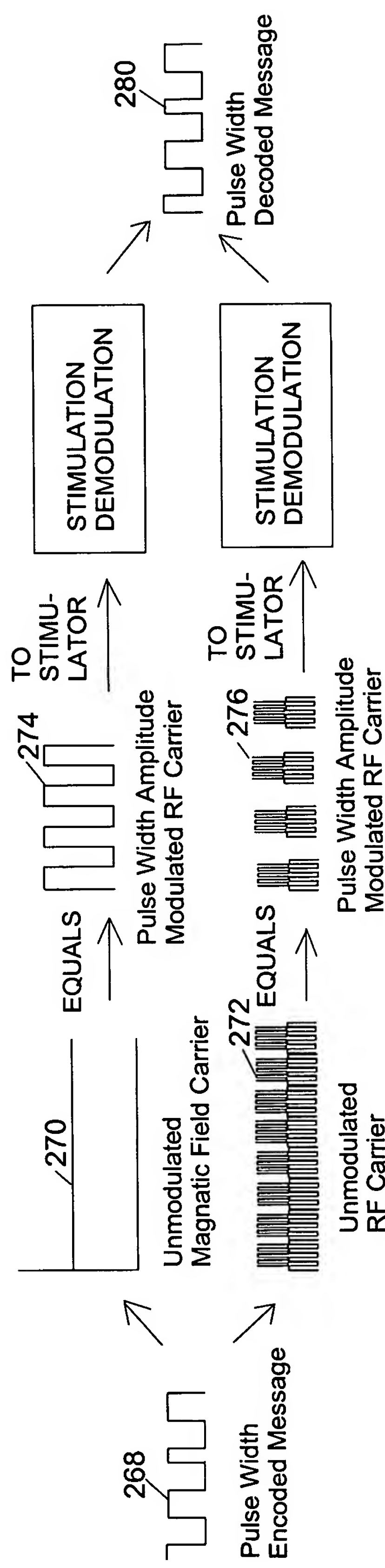


FIG. 30 B



**FIG. 31 A**



**FIG. 31 B**

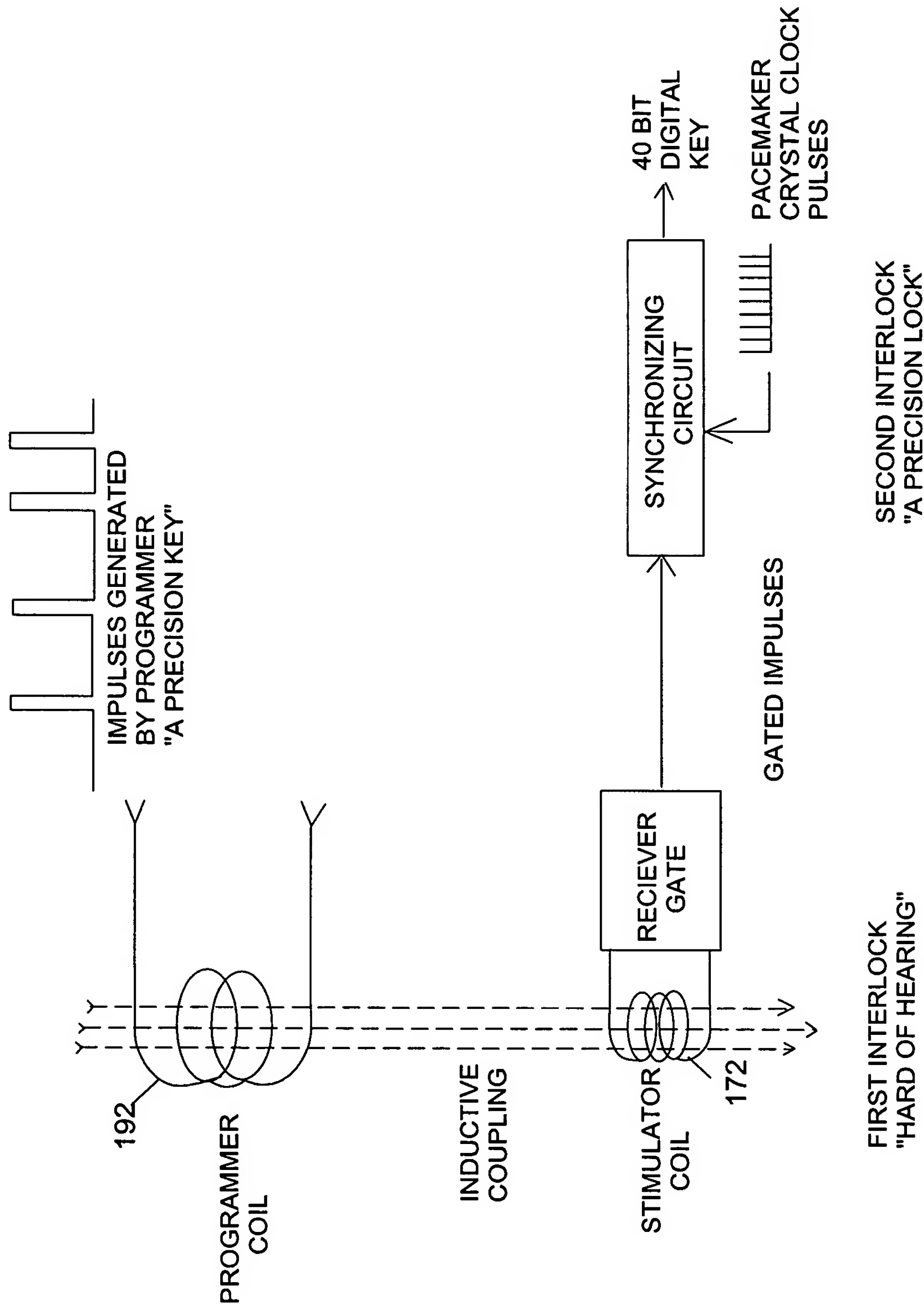


FIG. 32

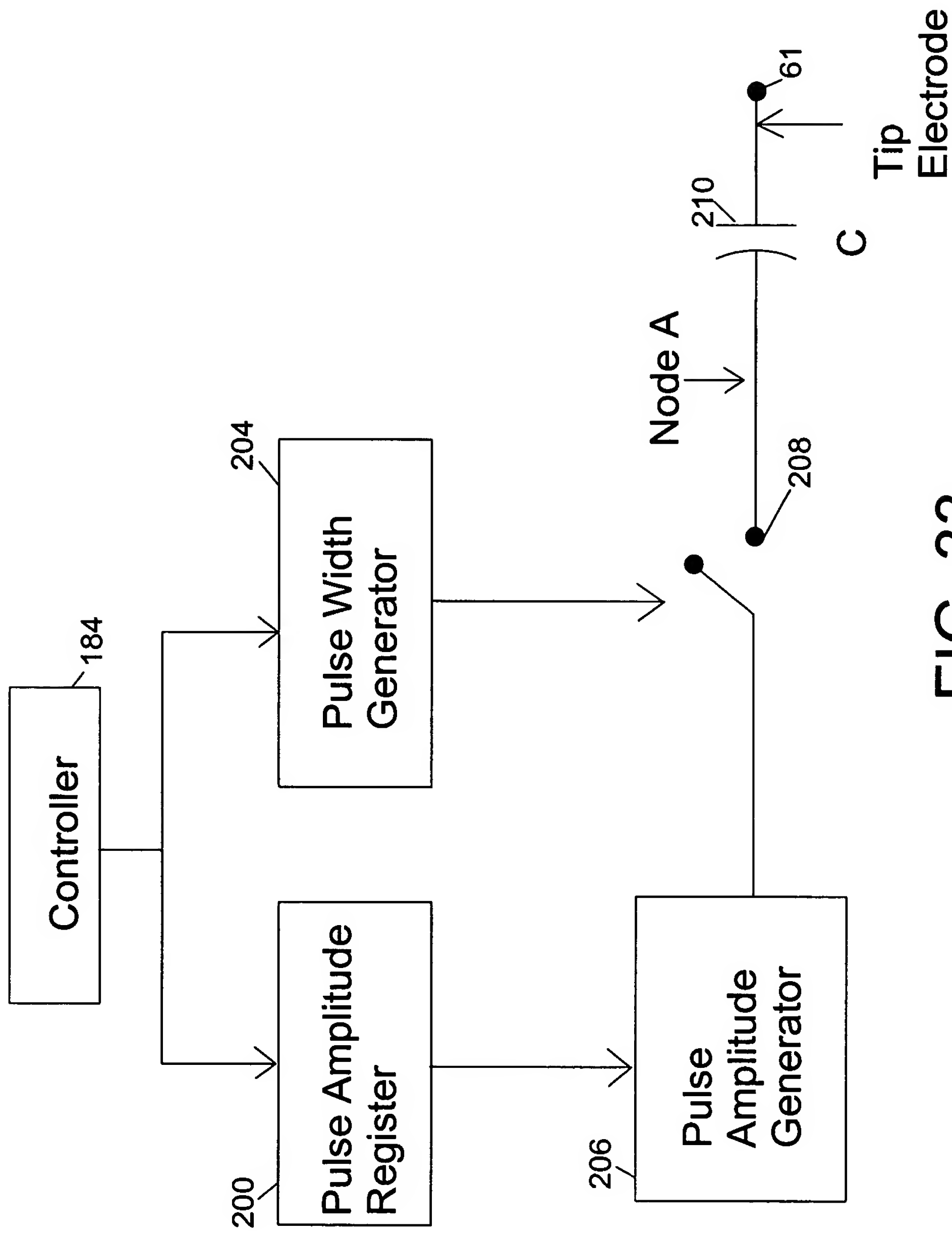


FIG. 33

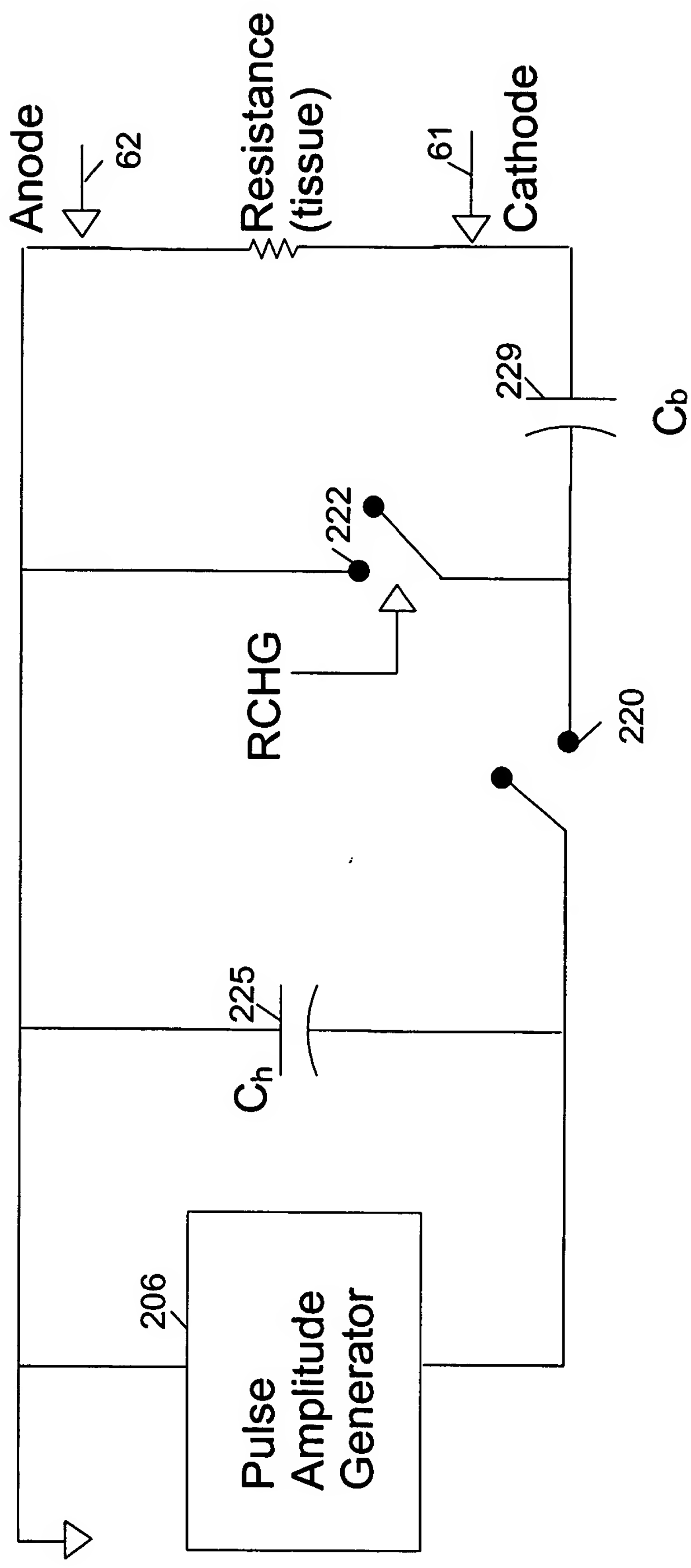


FIG. 34



# Pulse train

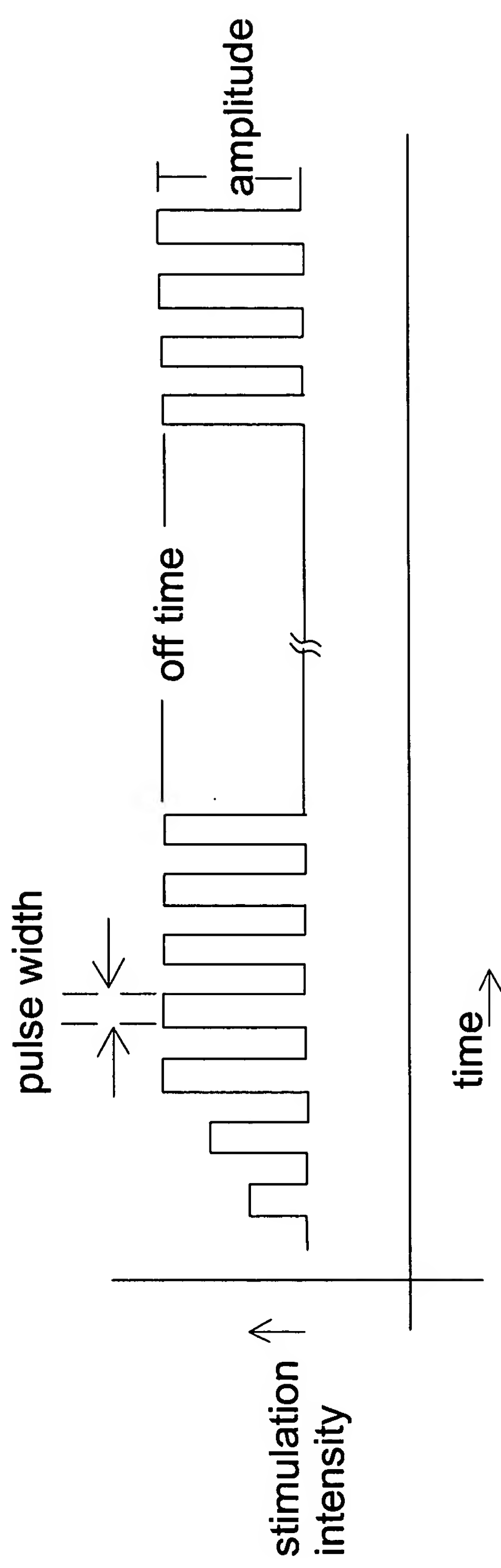


FIG. 35

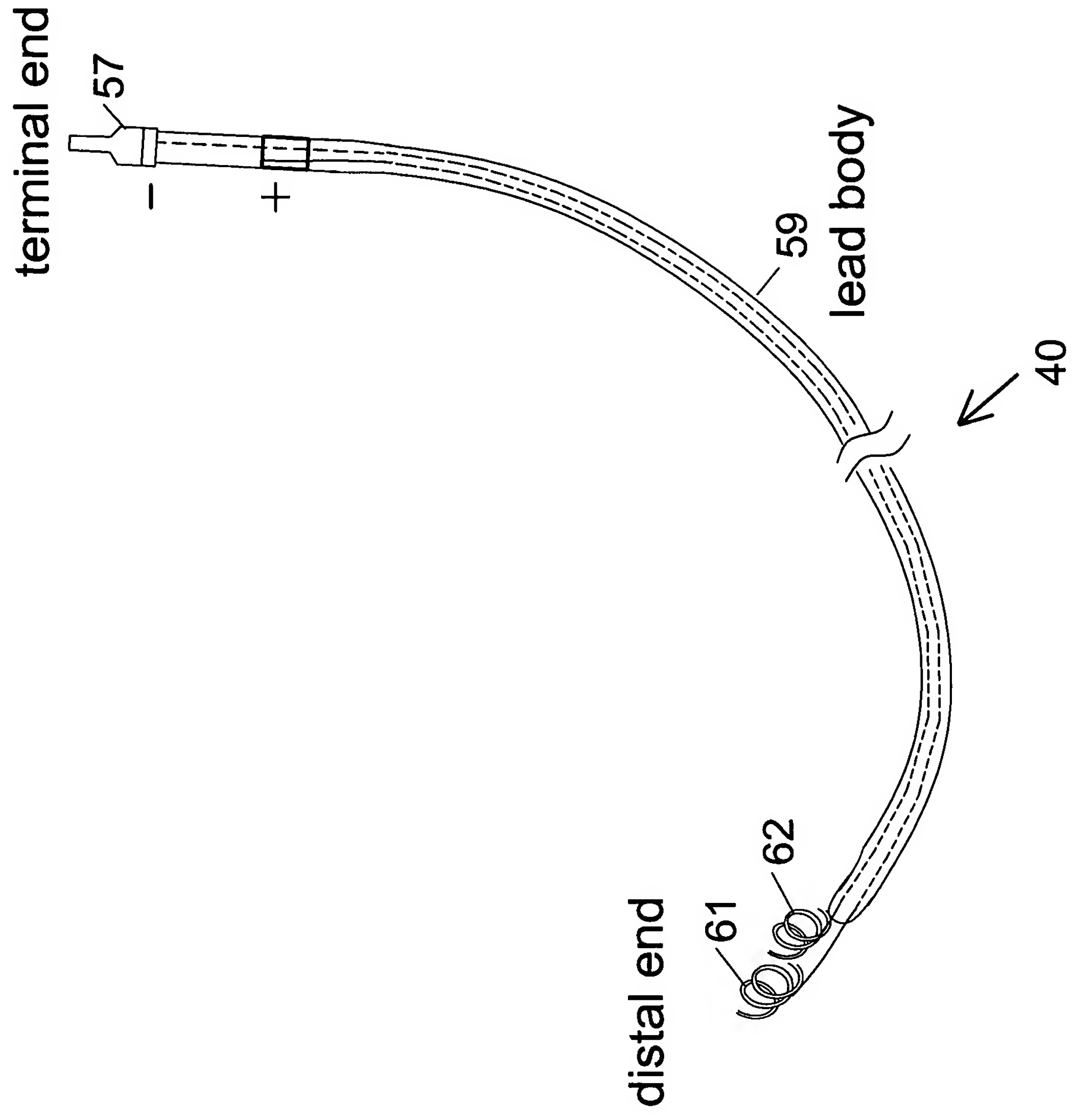


FIG. 36

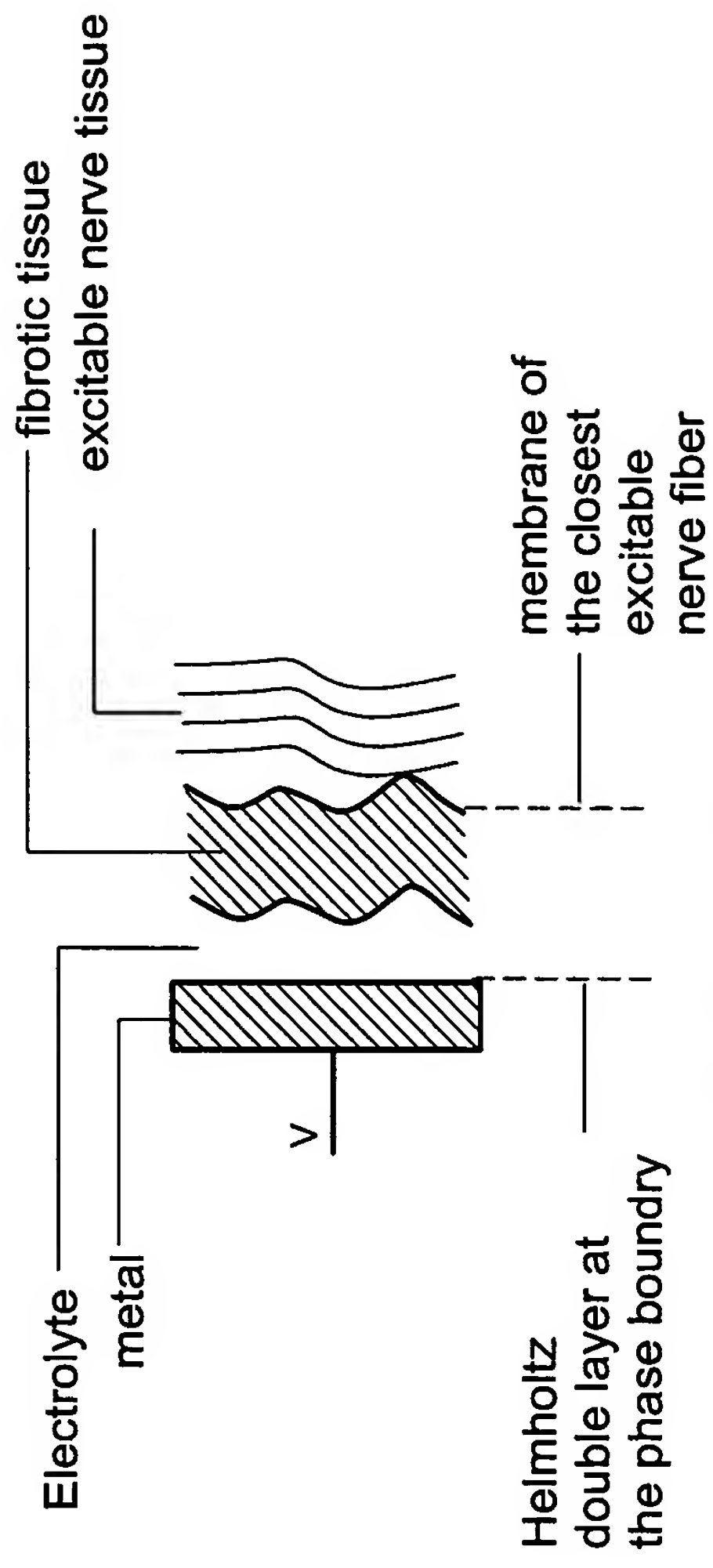


FIG. 37A

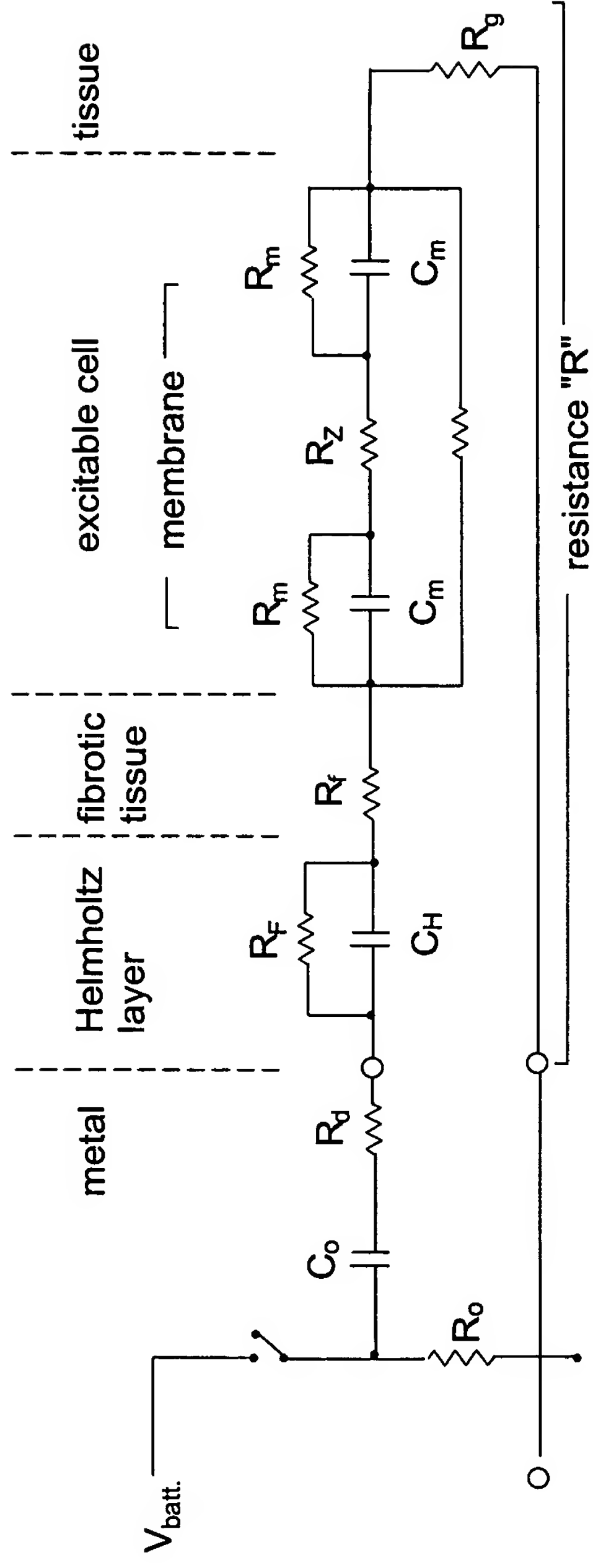


FIG. 37B

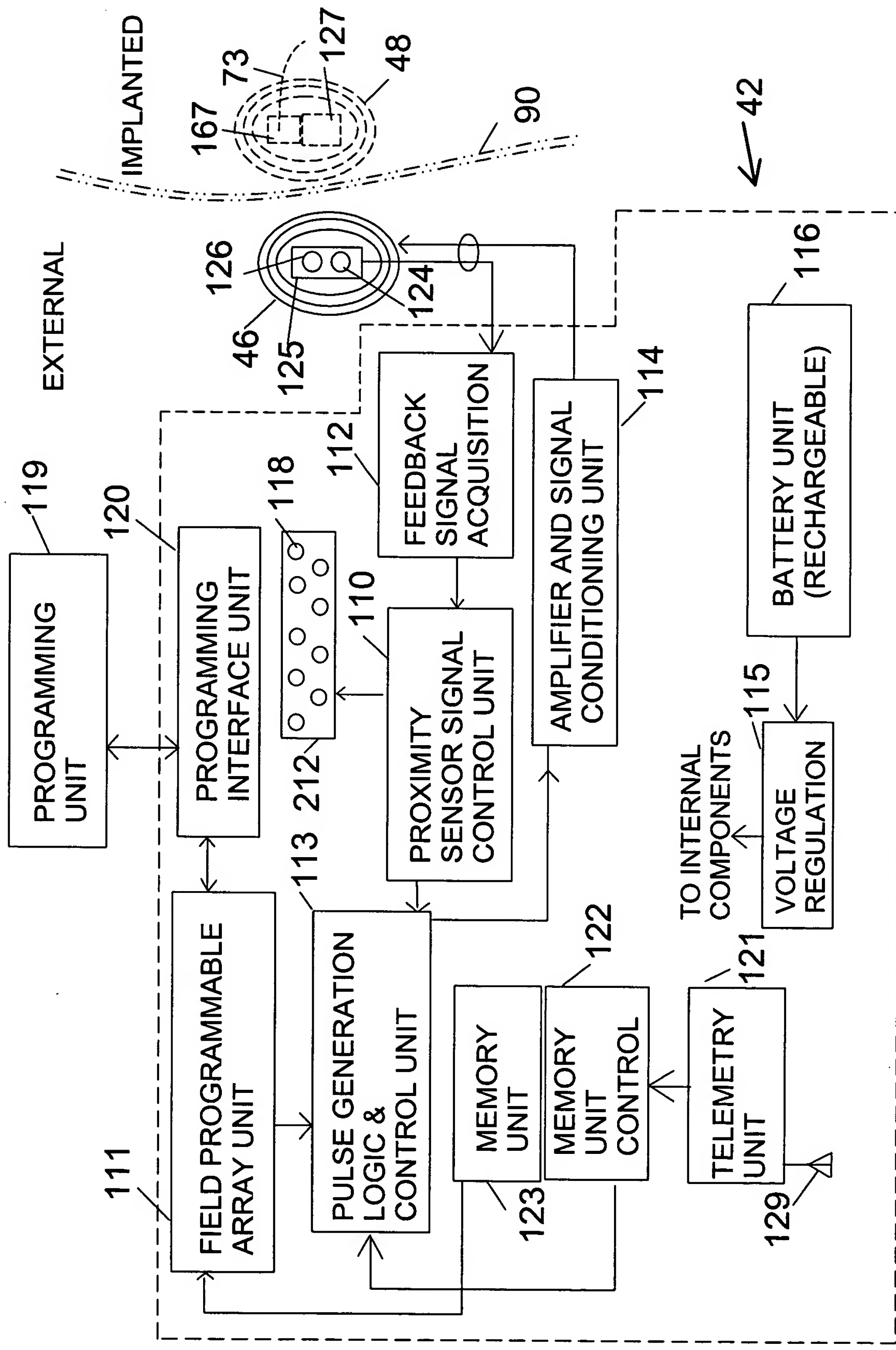


FIG. 38

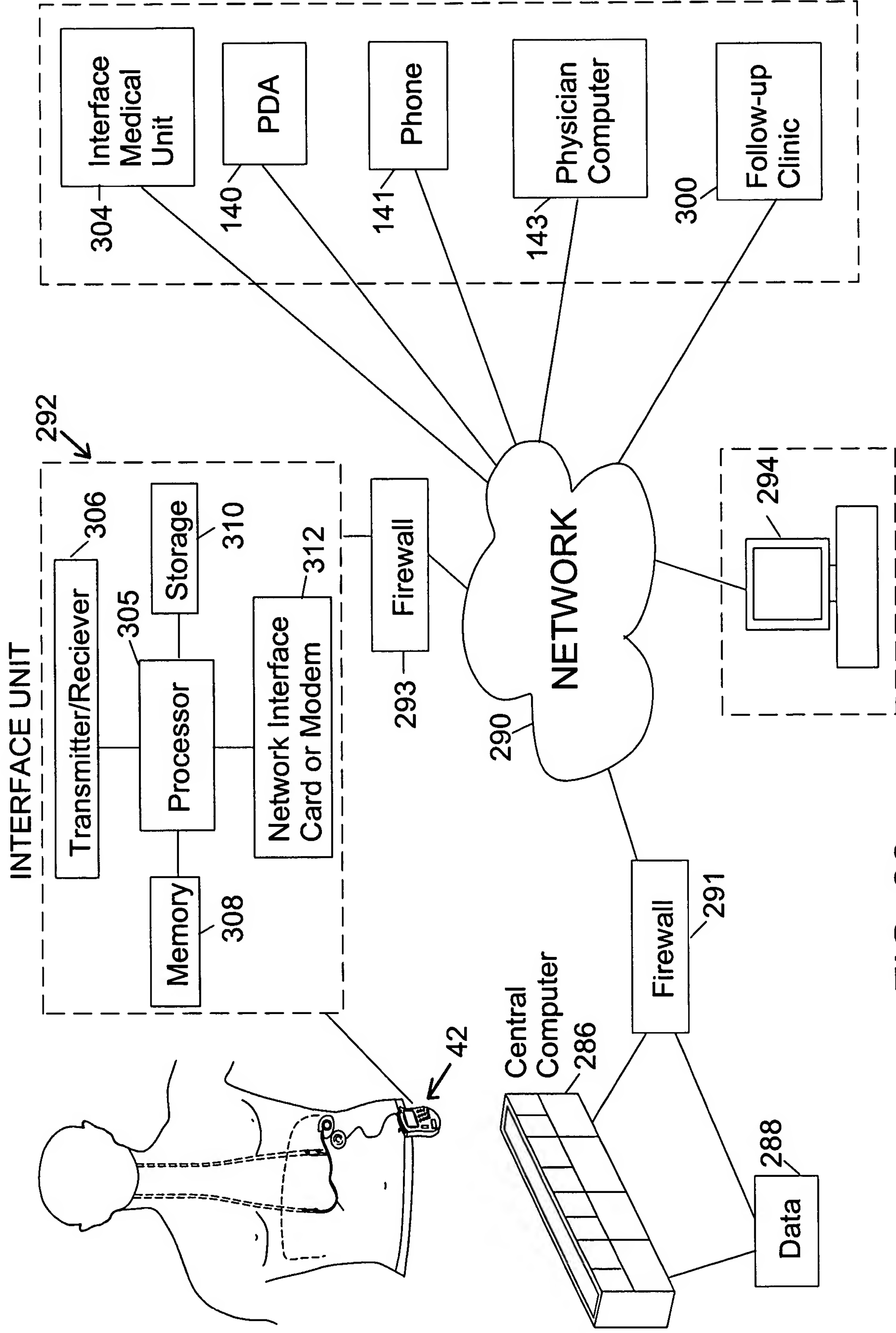


FIG. 39

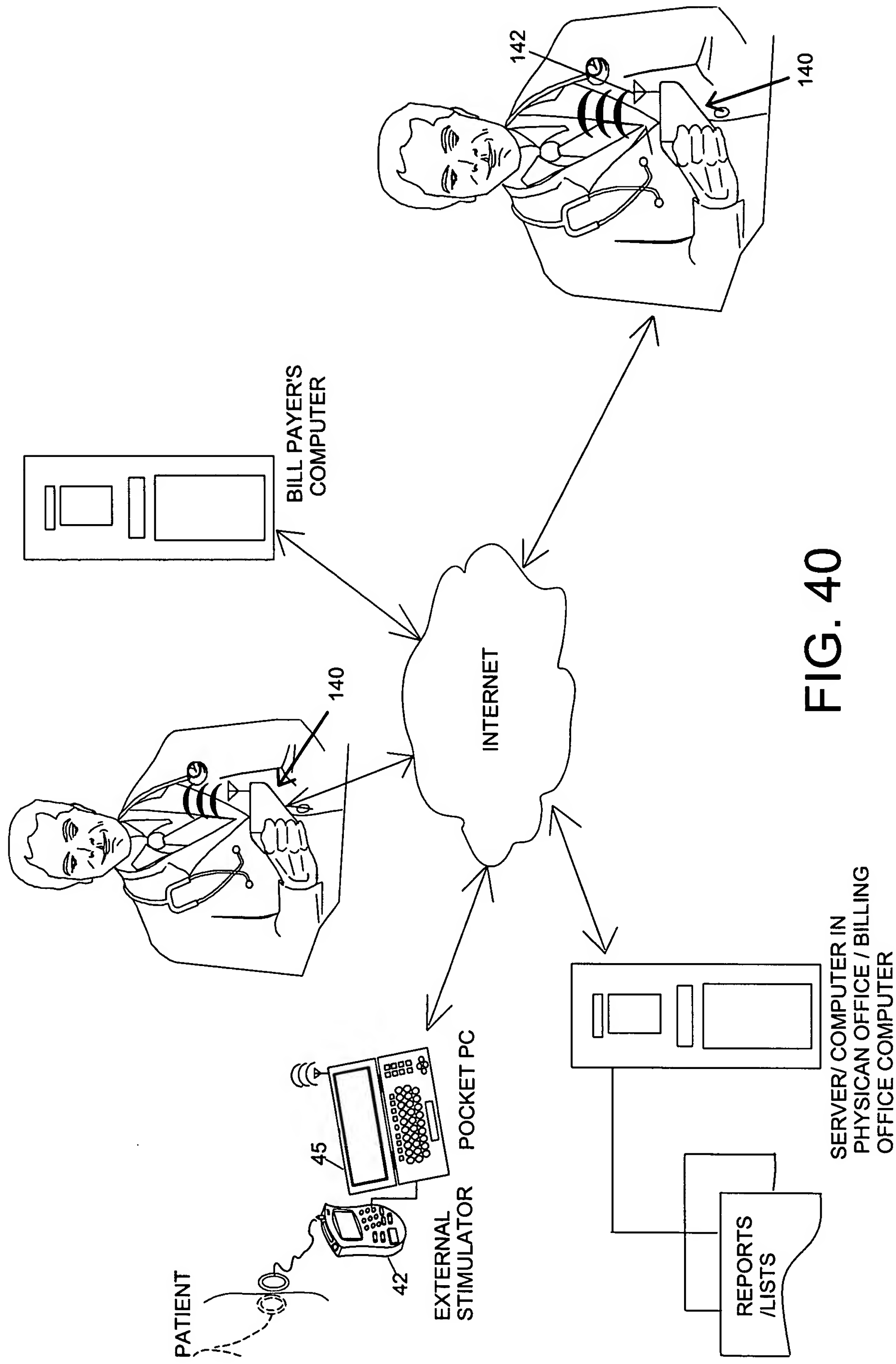


FIG. 40

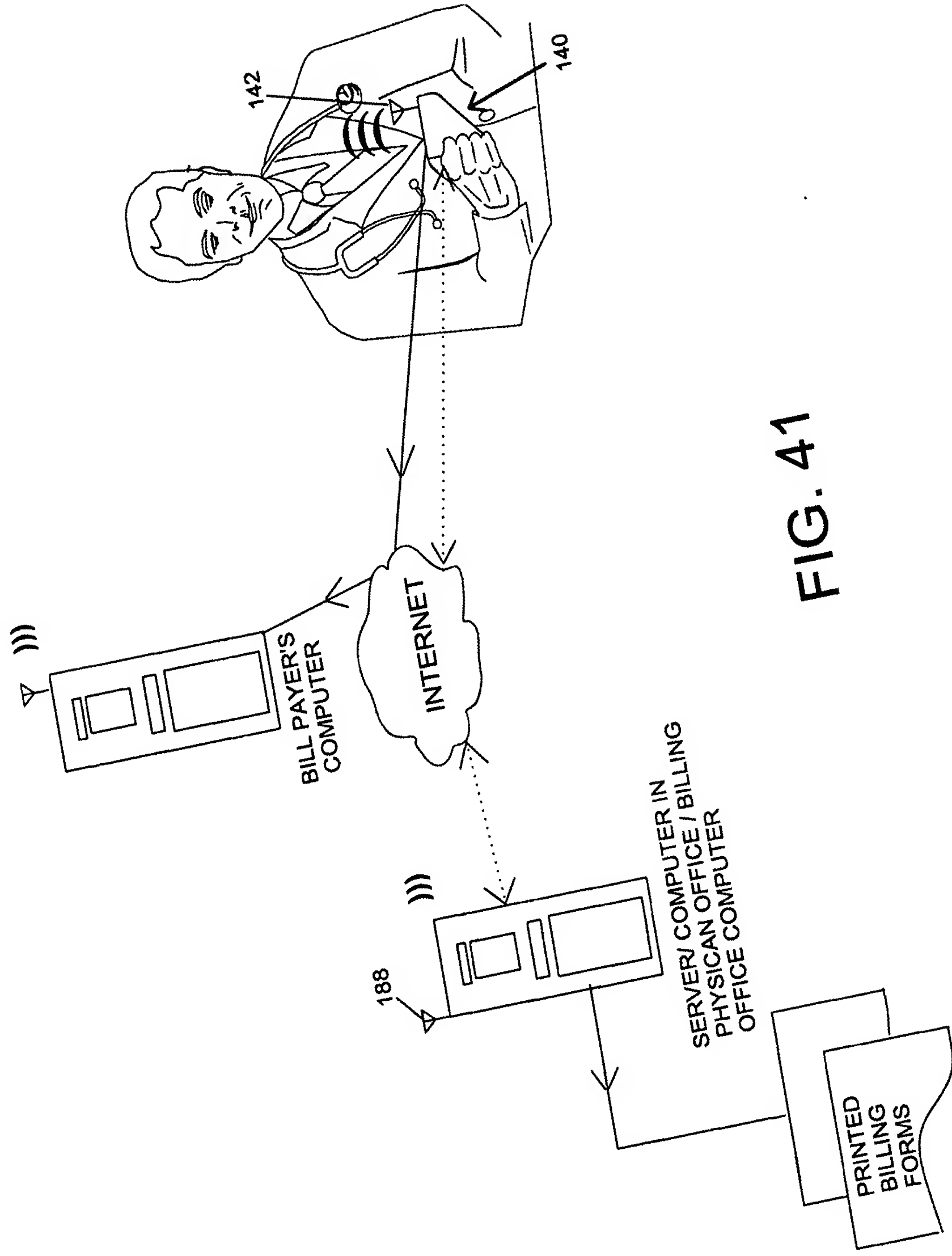
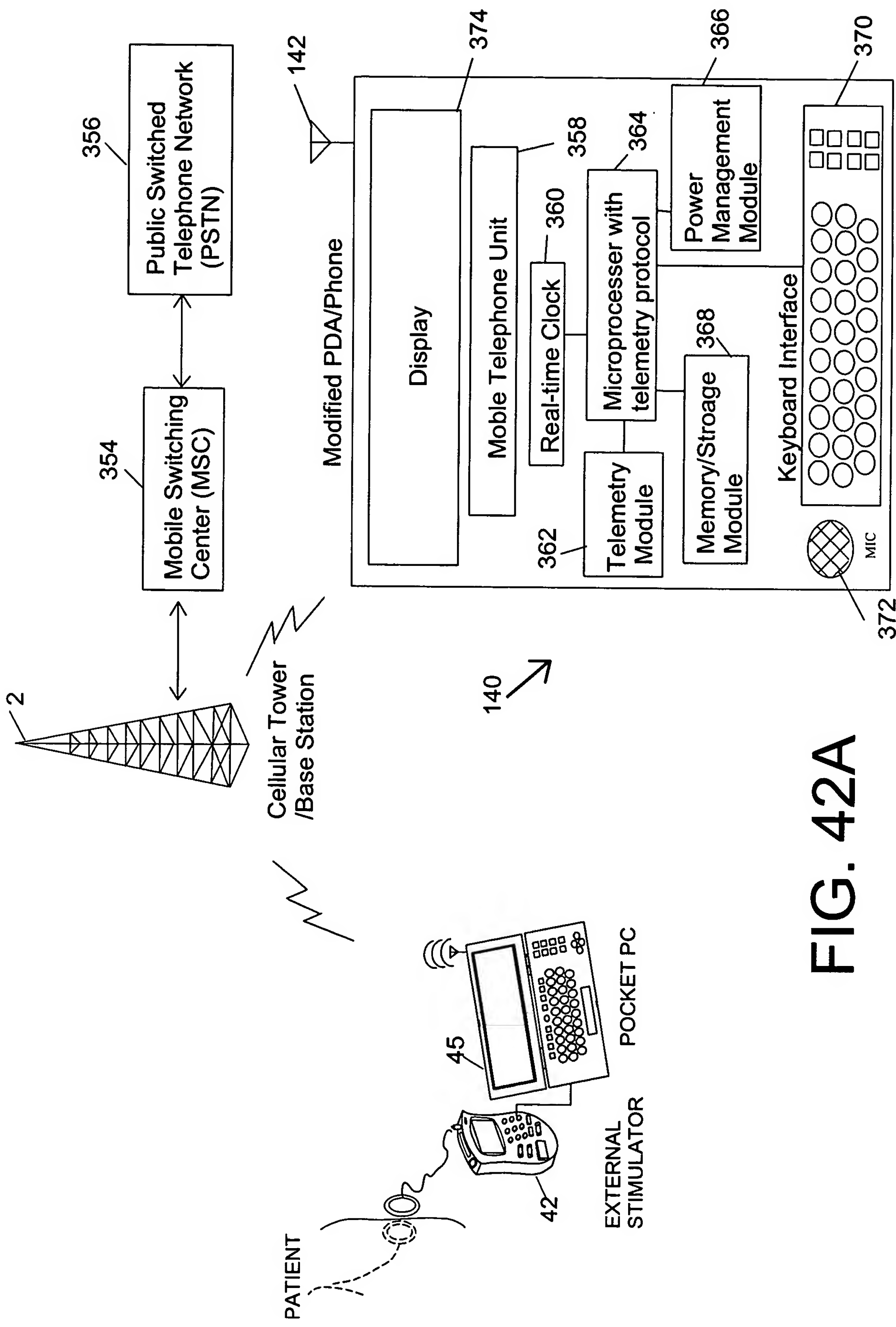


FIG. 41



**FIG. 42A**



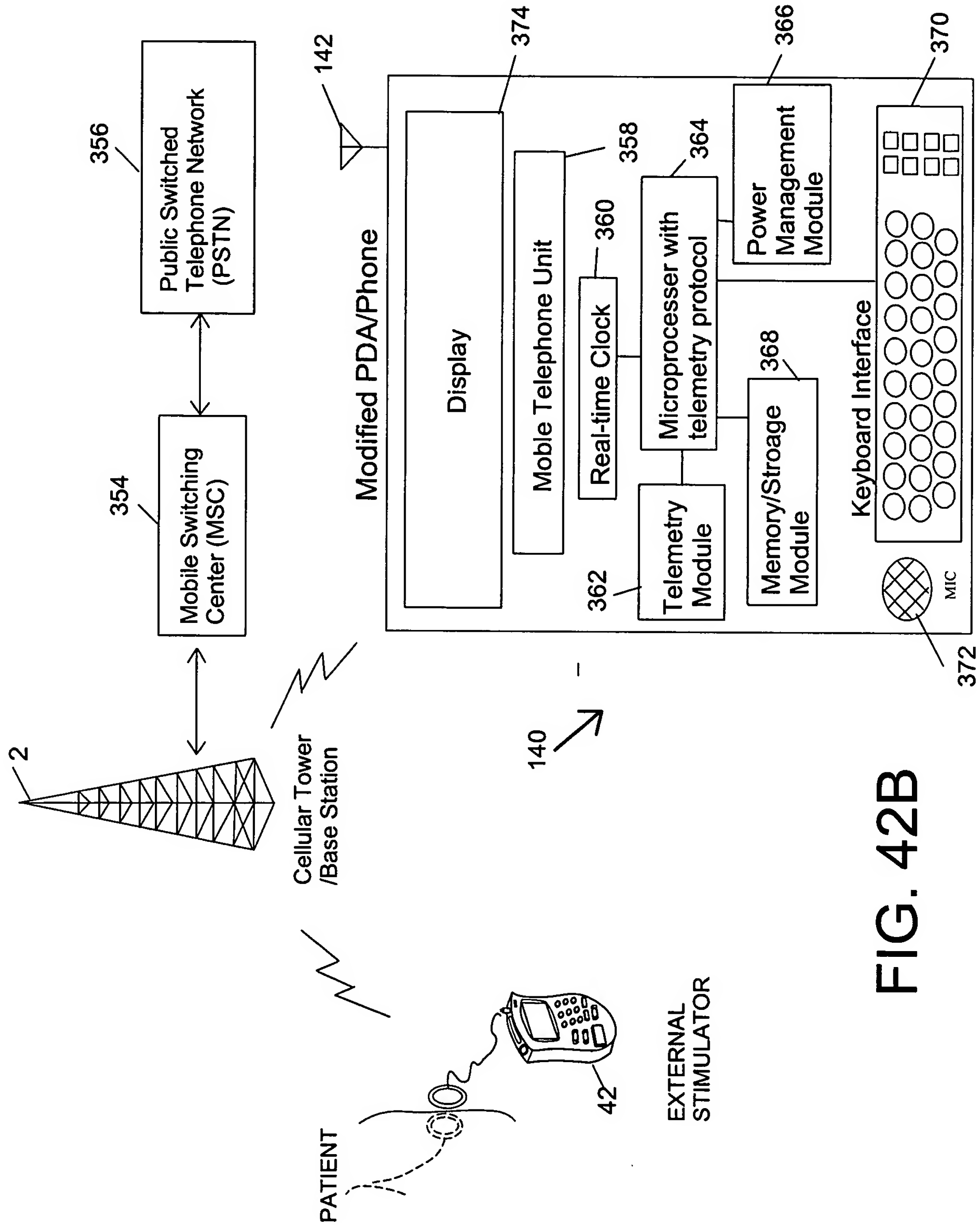


FIG. 42B

# Migration Paths to 3G

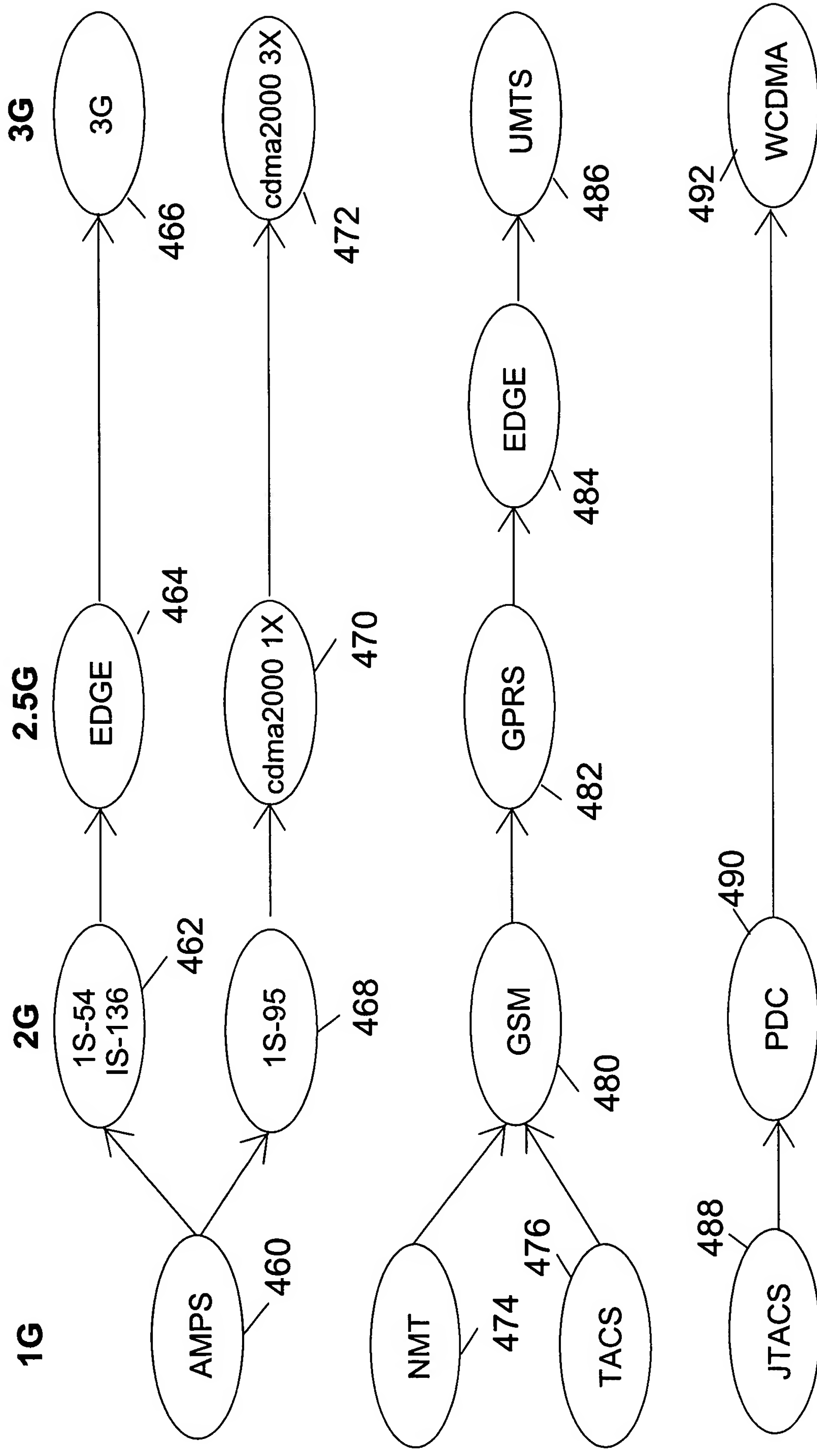


FIG. 43

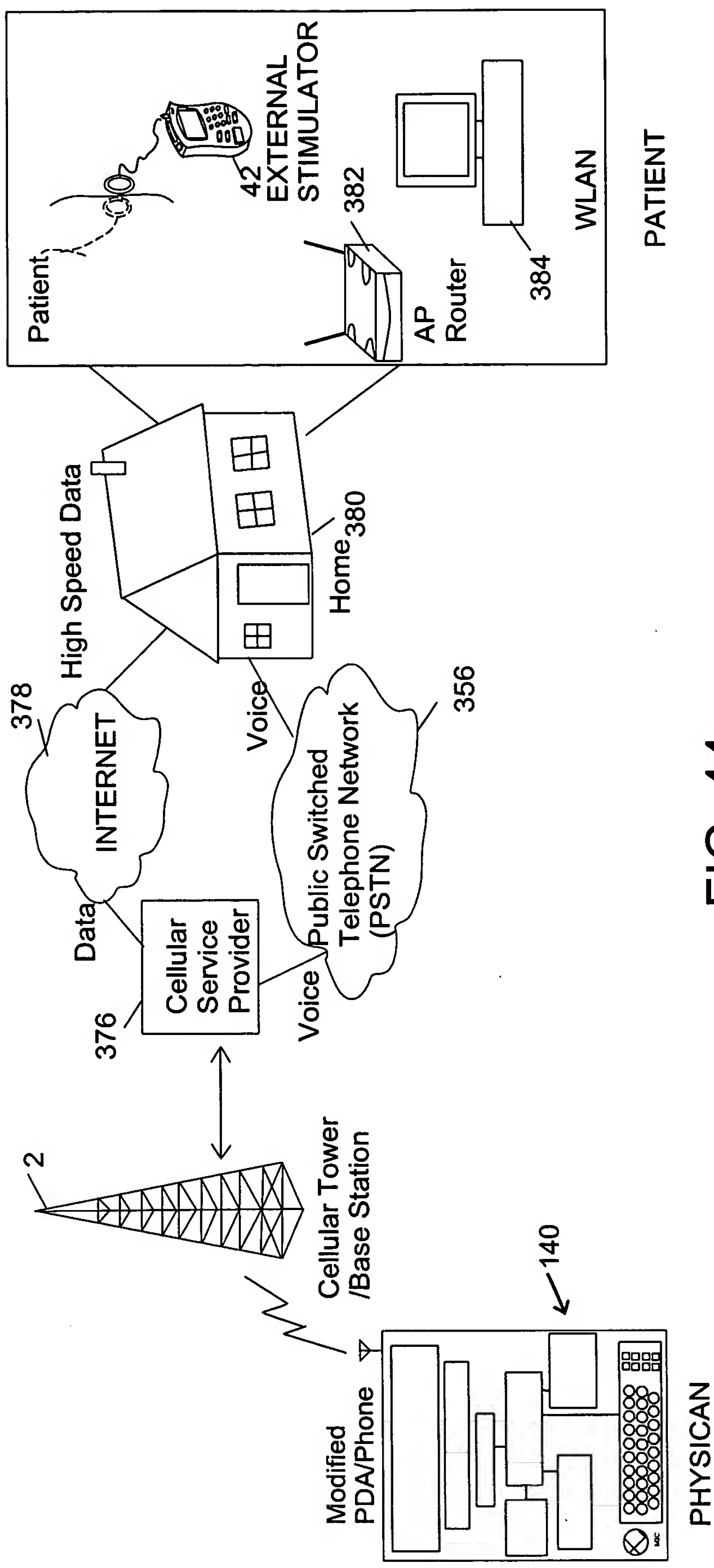


FIG. 44

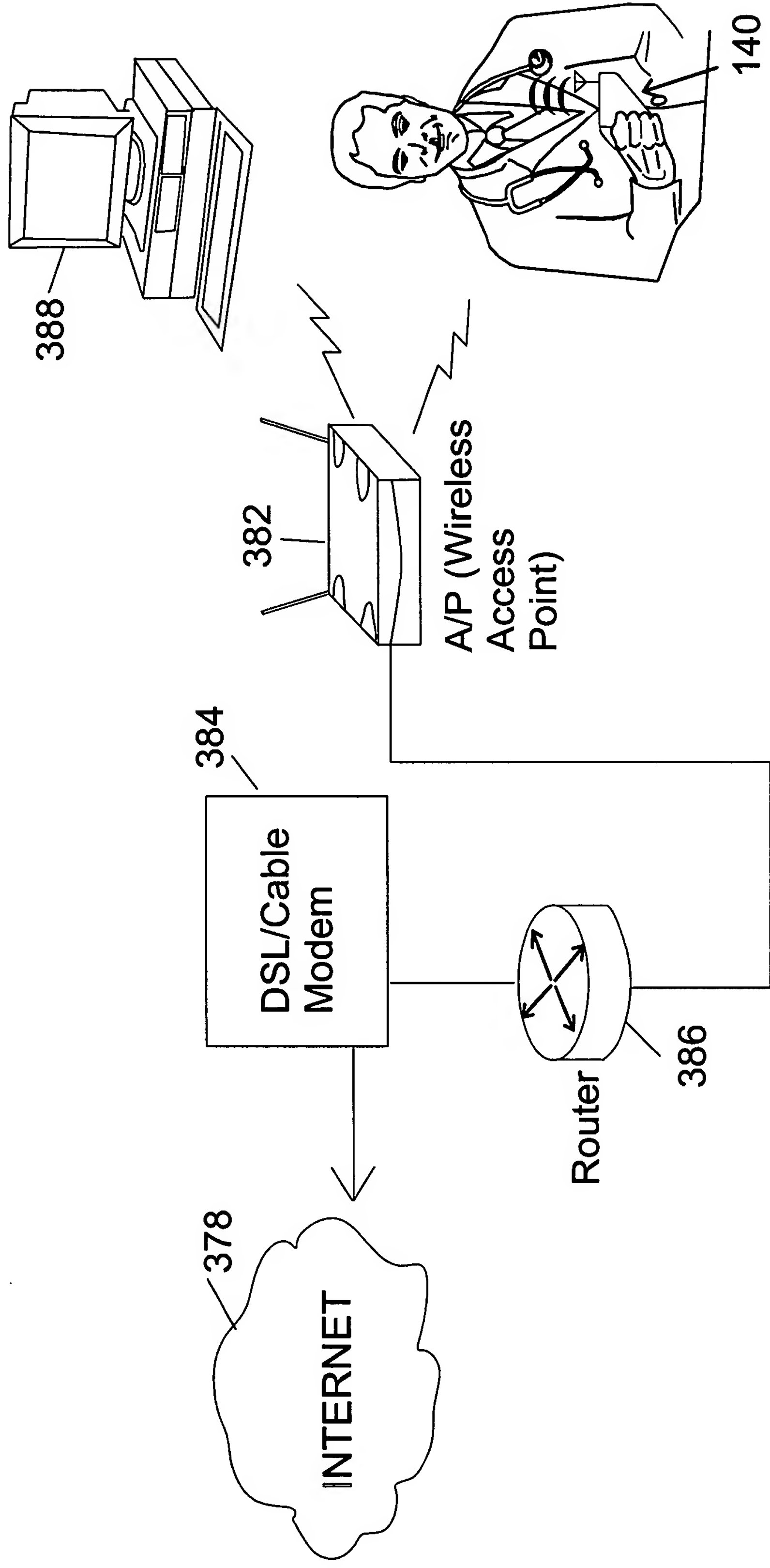


FIG. 45A

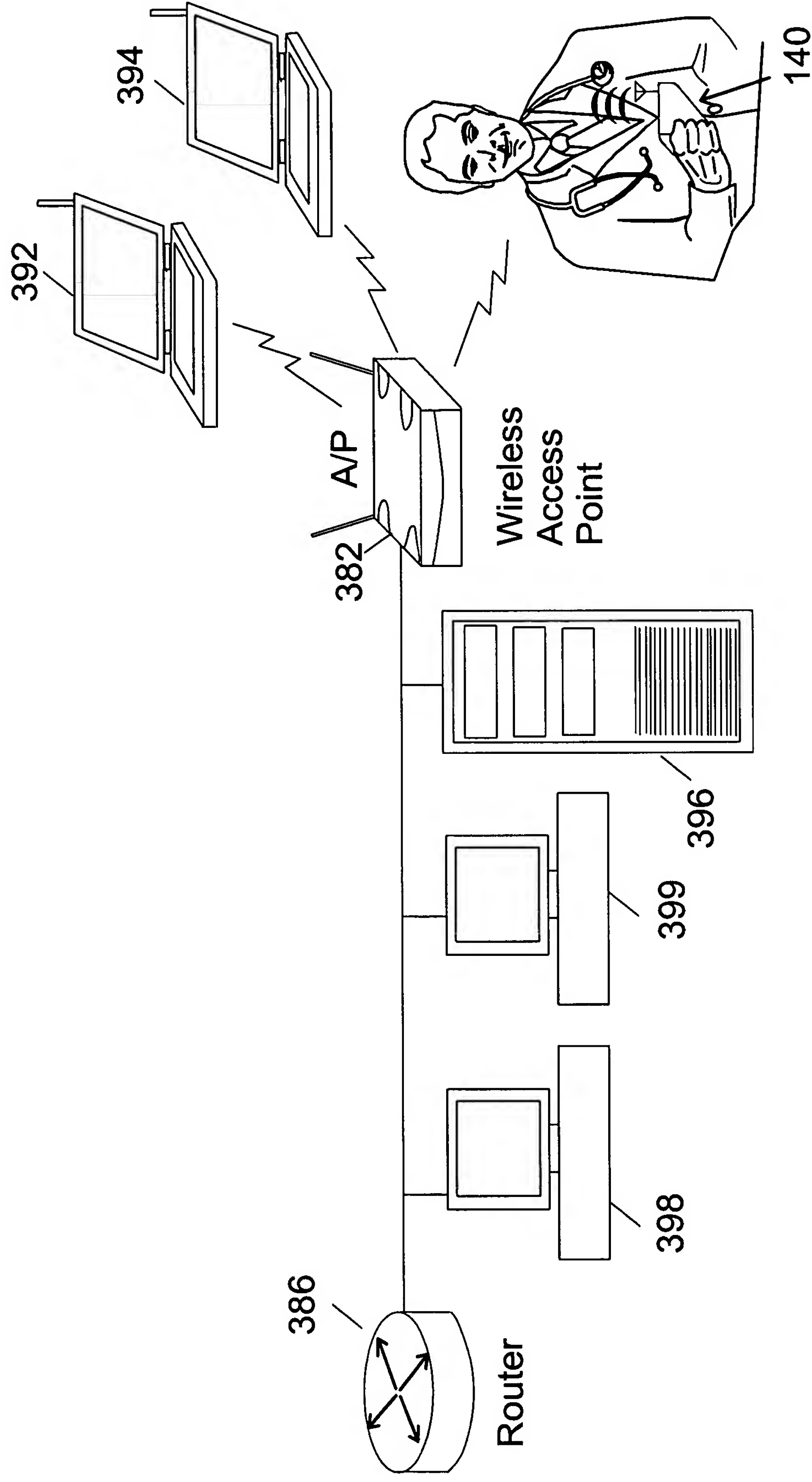


FIG. 45B

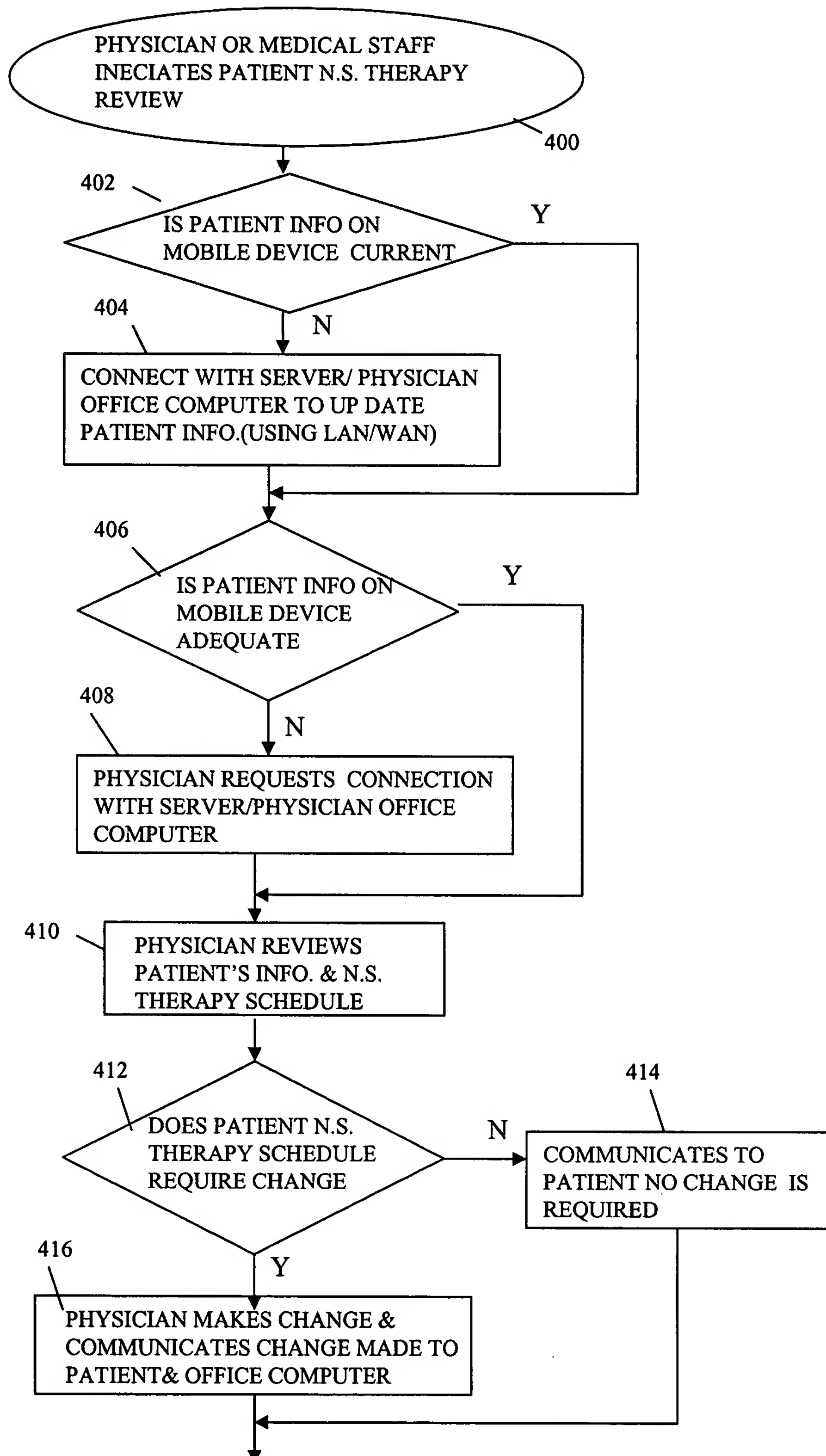


FIG. 46

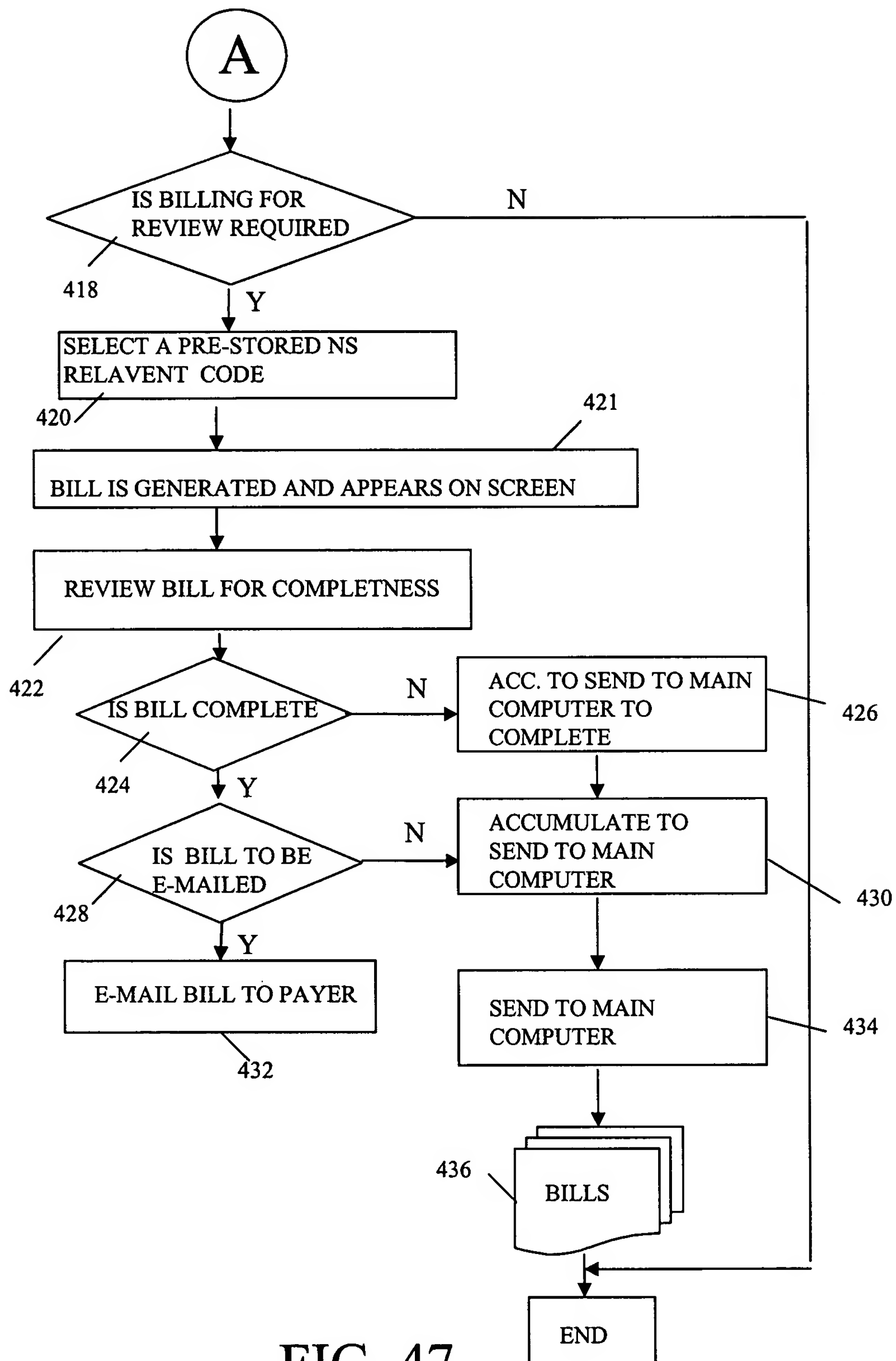


FIG. 47

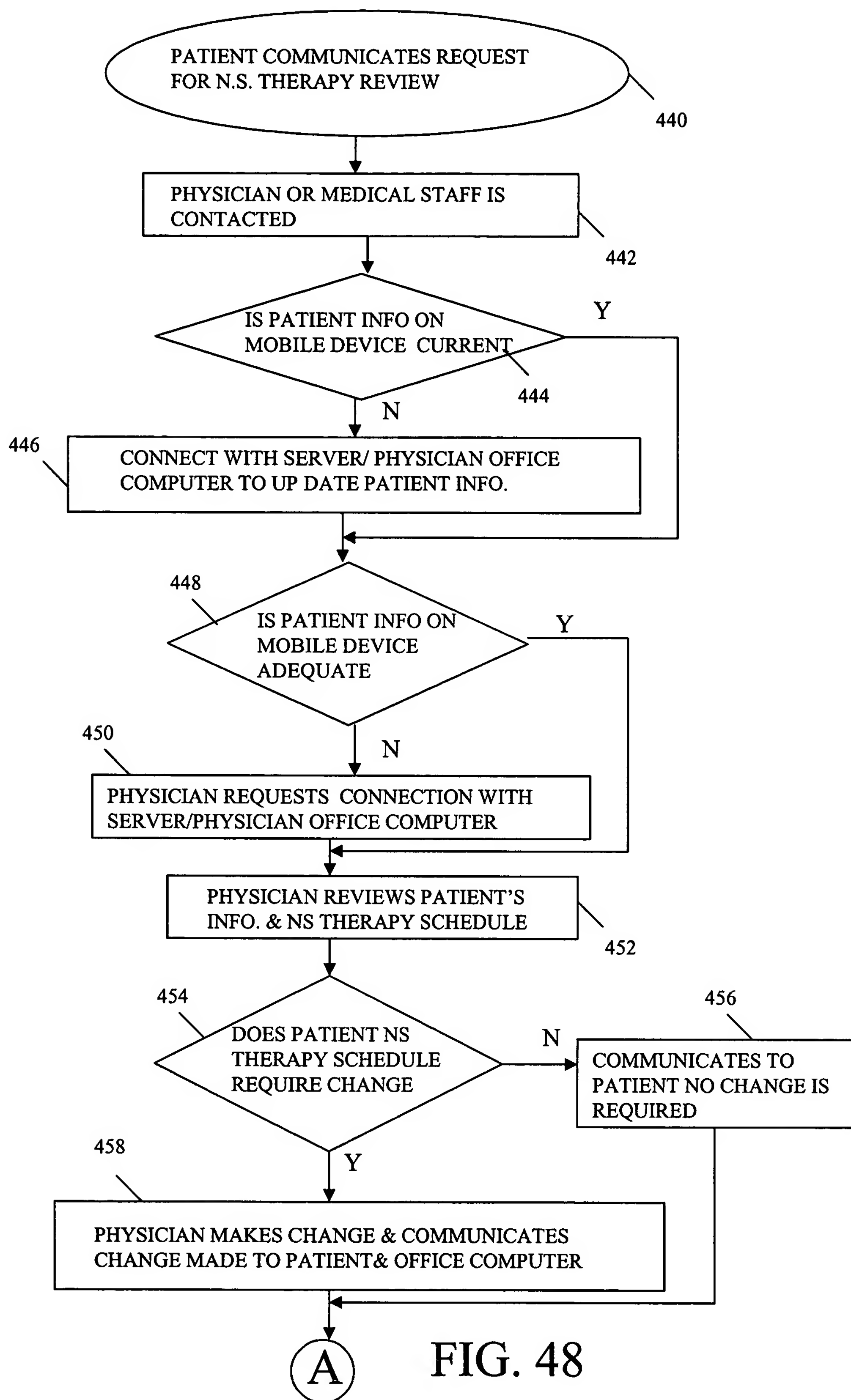


FIG. 48



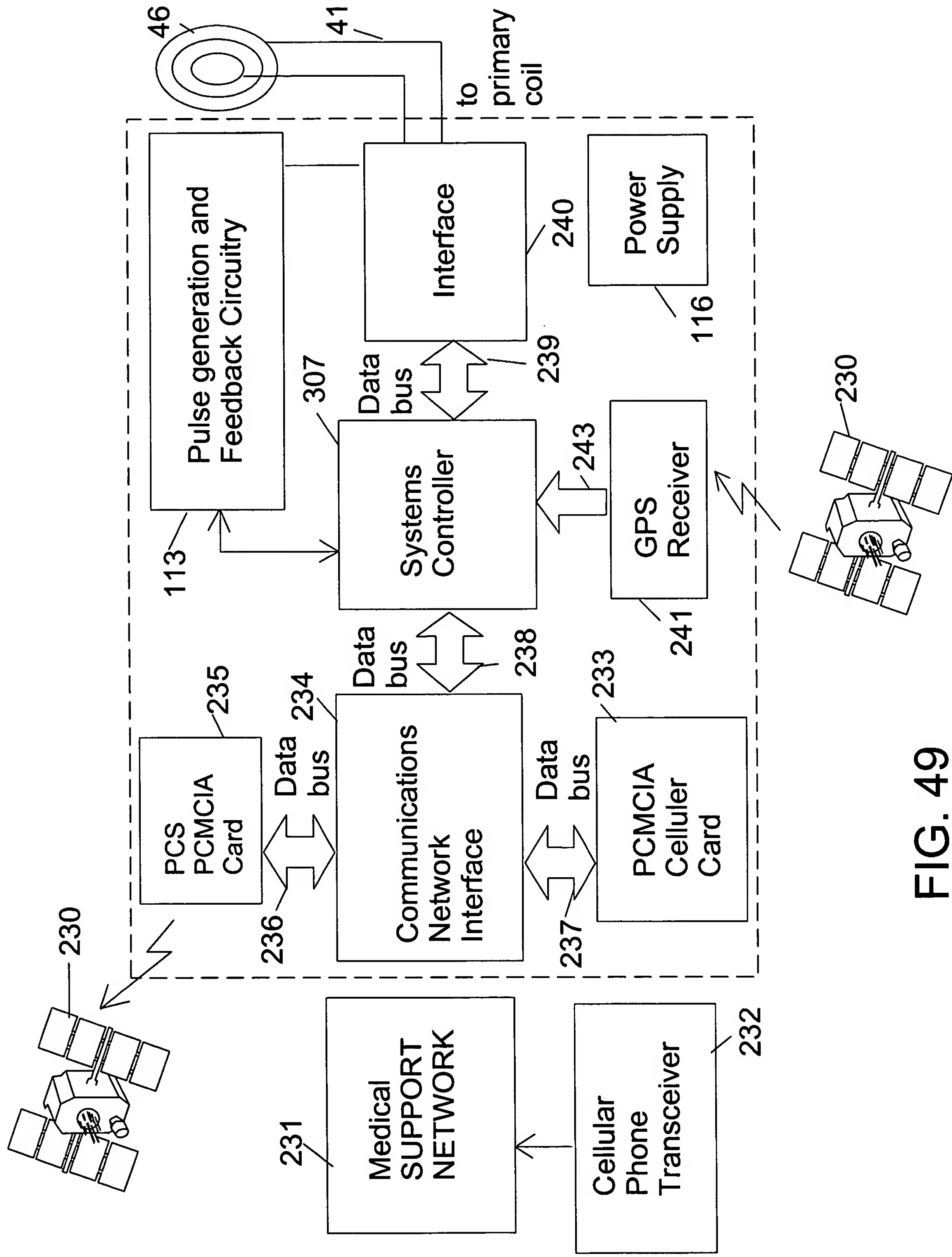


FIG. 49

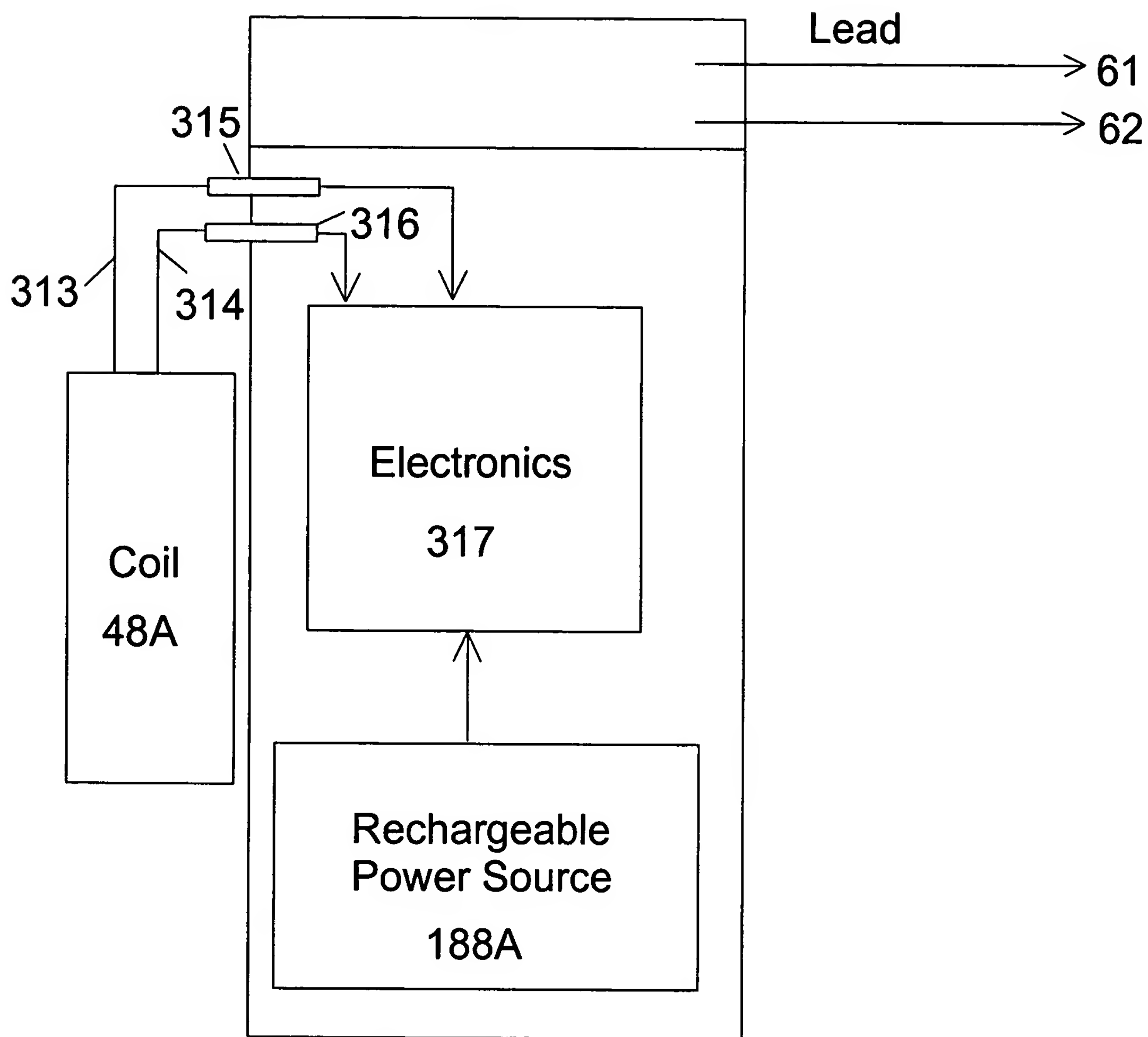


FIG. 50

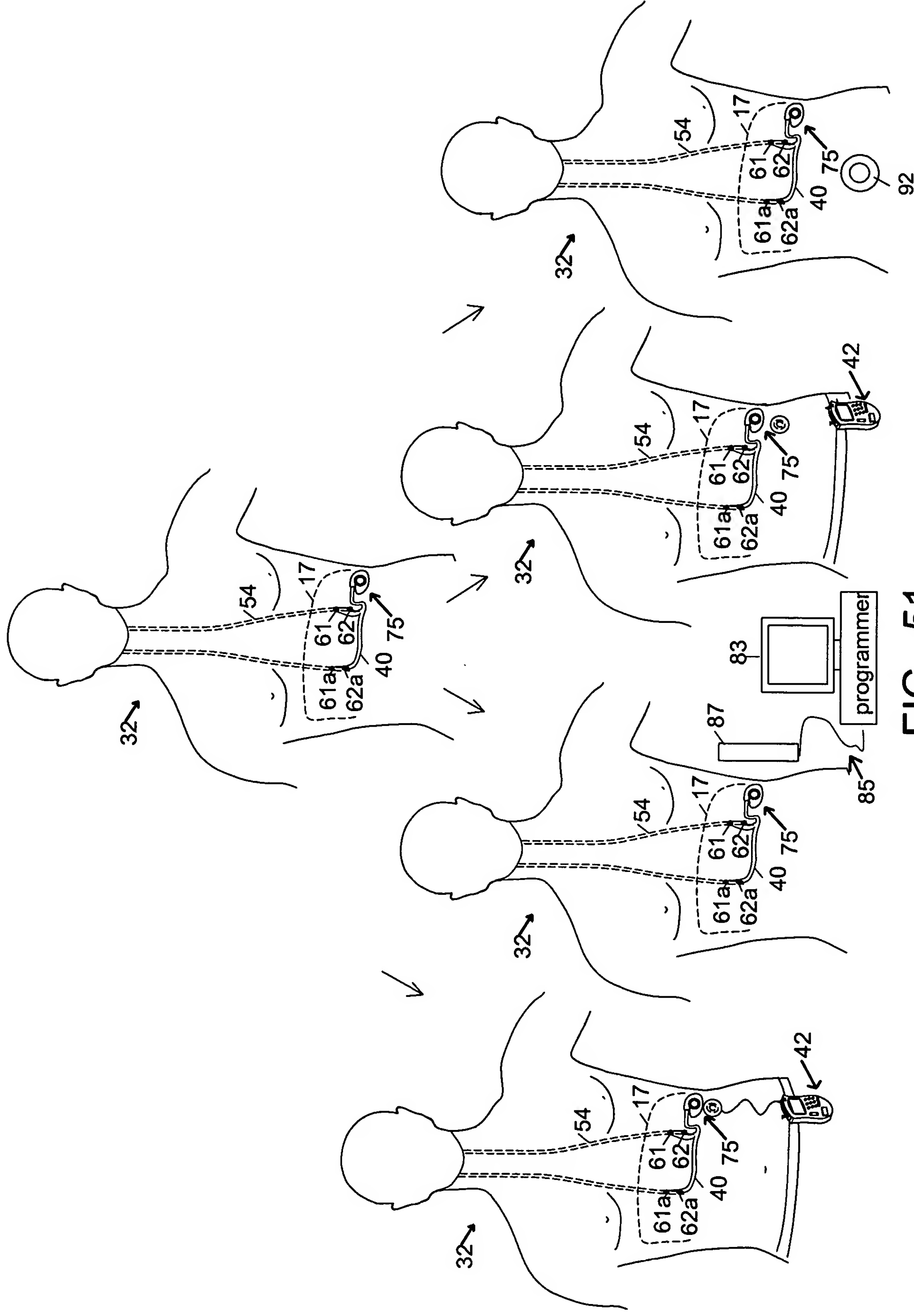


FIG. 51

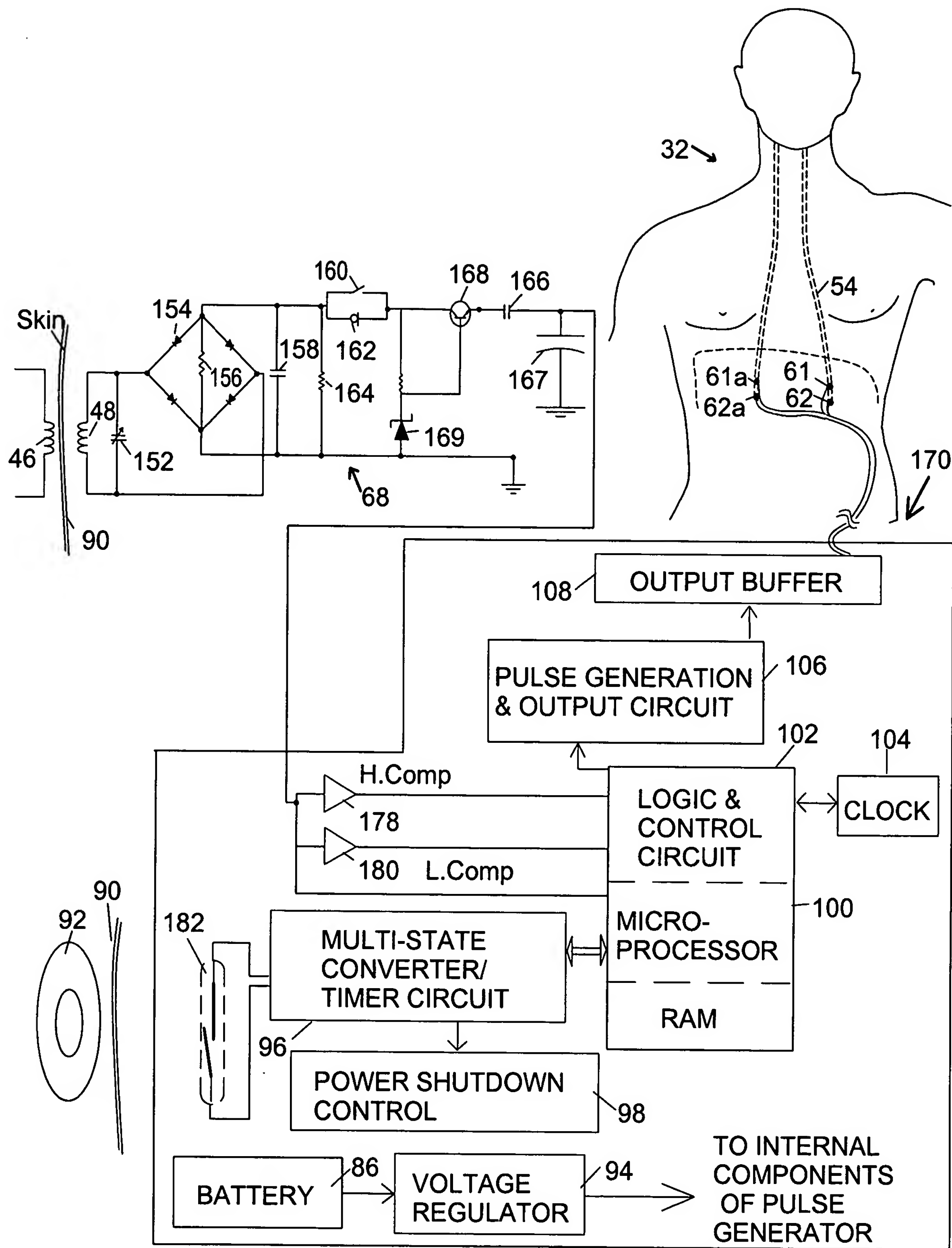


FIG. 52

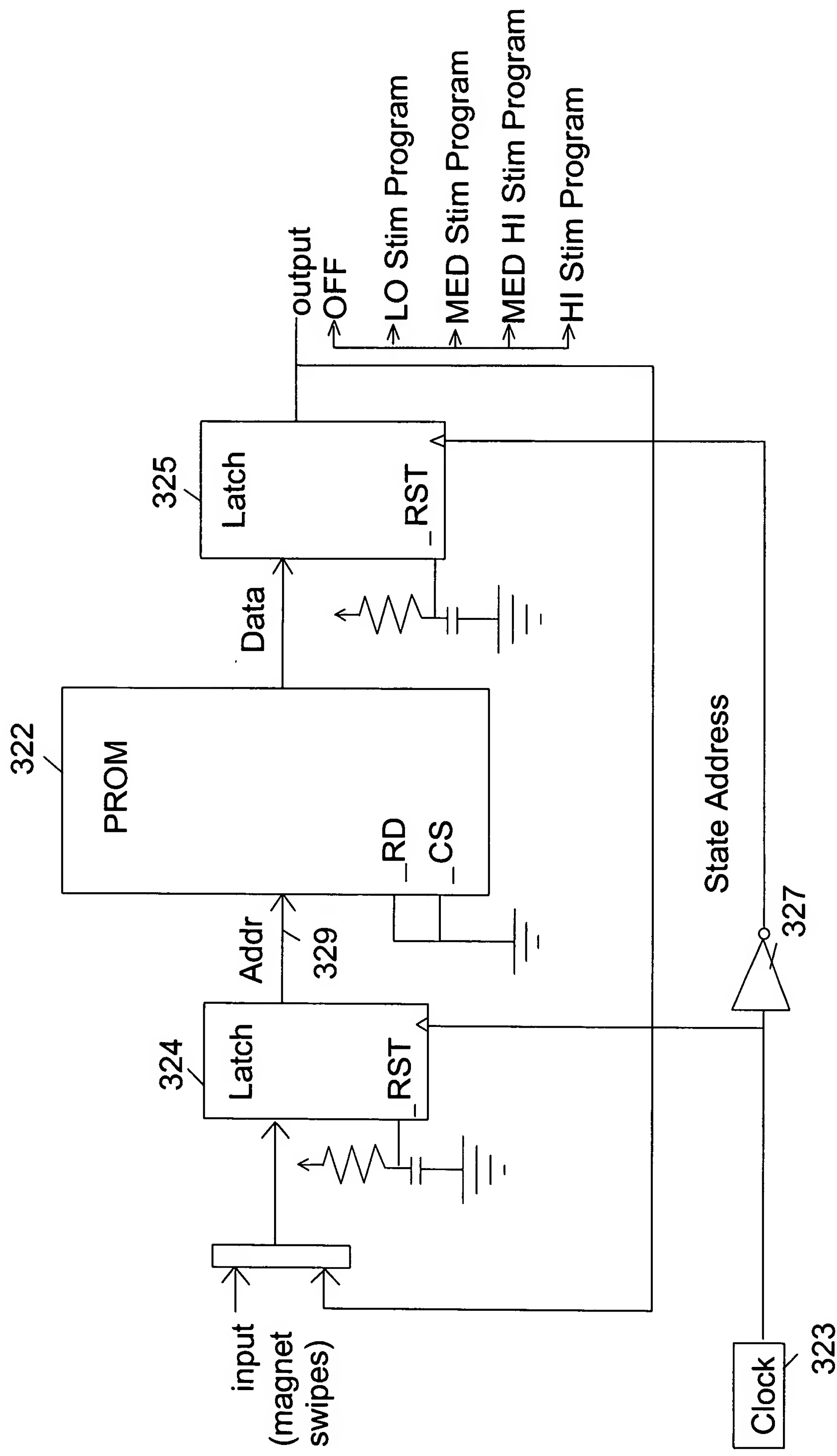


FIG. 53